Drug & Cosmetic INDUSTRY

MAY 1945

CONTENTS

KEEPING POSTED	569
POST-WAR DISTRIBUTION	574
ANTIBIOTICS OTHER THAN PENICILLIN	576
THE VITAMIN BUSINESS	578
MENTHOL	579
COSMETIC EMULSION MANUFACTURE	580
DRUG CULTIVATION IN CALIFORNIA	582
CHOOSING A TRADE-MARK	585
PACKAGING AND SELLING	587
NEWS	611
PRODUCTION FORUM	621
COMPOUNDER'S CORNER	634
ADVANCING THERAPY	639
INDUSTRY'S BOOKS	645
PERFUMER'S SHELF	648
PURCHASING DEPARTMENT	651

The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer; Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass., U. S. A. Editorial and General Office, 101 West 31st St., New York, 1, N. Y., U. S. A.

Business Manager, Frazer V. Sinclair; Advertising Representatives, P. W. Alexander (on leave with U. S. Army), Walter M. Brauneiss, C. R. Keeley; Production Manager, Katherine Hyde; Circulation Manager, Harry G. Kelbly.

Subscription price—$2.00 a year, in advance, Foreign Countries, $3.00. Single copies, 25c; Back issues 50c. Entered as Second Class Matter, January 1, 1928, at the Post Office at Pittsfield, Mass., under the Act of March 3, 1879.

Member of Audit Bureau of Circulations.

Contents Copyrighted 1945 by Drug Markets, Inc.

Printed by Sun Printing Corp., Pittsfield, Mass., U. S. A.

THOMAS R. FARRELL, Editor

ELMER SHEETS, Managing Editor

FRANCIS CHILSON, Production Consultant

M. A. LESSER, Technical Editor

HARRY G. KELBLY, Market Editor

HILDA C. McCOLLOM, Art Director

Drug & Cosmetic INDUSTRY

MAY 1945

CONTENTS

KEEPING POSTED	569
POST-WAR DISTRIBUTION	574
ANTIBIOTICS OTHER THAN PENICILLIN	576
THE VITAMIN BUSINESS	578
MENTHOL	579
COSMETIC EMULSION MANUFACTURE	580
DRUG CULTIVATION IN CALIFORNIA	582
CHOOSING A TRADE-MARK	585
PACKAGING AND SELLING	587
NEWS	611
PRODUCTION FORUM	621
COMPOUNDER'S CORNER	634
ADVANCING THERAPY	639
INDUSTRY'S BOOKS	645
PERFUMER'S SHELF	648
PURCHASING DEPARTMENT	651

The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer; Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass., U. S. A. Editorial and General Office, 101 West 31st St., New York, 1, N. Y., U. S. A.

Business Manager, Frazer V. Sinclair; Advertising Representatives, P. W. Alexander (on leave with U. S. Army), Walter M. Brauneiss, C. R. Keeley; Production Manager, Katherine Hyde; Circulation Manager, Harry G. Kelbly.

Subscription price—$2.00 a year, in advance, Foreign Countries, $3.00. Single copies, 25c; Back issues 50c. Entered as Second Class Matter, January 1, 1928, at the Post Office at Pittsfield, Mass., under the Act of March 3, 1879.

Member of Audit Bureau of Circulations.

Contents Copyrighted 1945 by Drug Markets, Inc.

Printed by Sun Printing Corp., Pittsfield, Mass., U. S. A.

THOMAS R. FARRELL, Editor

ELMER SHEETS, Managing Editor

FRANCIS CHILSON, Production Consultant

M. A. LESSER, Technical Editor

HARRY G. KELBLY, Market Editor

HILDA C. McCOLLOM, Art Director

when quality counts... count on MONSANTO

Into Monsanto Pharmaceuticals go years of experience in painstaking research and precise manufacturing. Every step in production is guarded by strict laboratory control. Such careful procedures, which apply to all Monsanto Pharmaceuticals, are your assurance of fine quality. MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 South Second St., St. Louis 4, Missouri. District Offices: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Seattle, Montreal, Toronto.

Oxzyn

SERVES THE TRADE EXCLUSIVELY

WITH QUALITY

LIPSTICKS

COMPACTS — ROUGE, POWDER, MAKEUP

CREAM ROUGES

EYE SHADOWS

EYEBROW PENCILS

WATERPROOF MASCARAS

CREAMS

FACE POWDERS

WE ALSO MANUFACTURE POWDER PUFFS, VANITY PUFFS, LOOSE SIFTER POWDER DEVICES AND SPECIAL LAMSDOWNE PUFFS

PRODUCTS MADE IN CONFORMITY WITH THE PURE FOOD, DRUG AND COSMETIC ACT
PRODUCTS LIABILITY INSURANCE CARRIED

OXZYN COMPANY

NEW JERSEY OFFICE
ONE PLEASANT AVENUE
CLIFTON

MANUFACTURING
Cosmetics of Quality
SINCE 1877
AUXILIARY PLANT • LOWELL, MASS.

CANADIAN OFFICE
54 OSLER AVENUE
WEST TORONTO, ONTARIO

n to Transfusion..

KIMBLE

CAPILLARY TUBES FOR TESTING

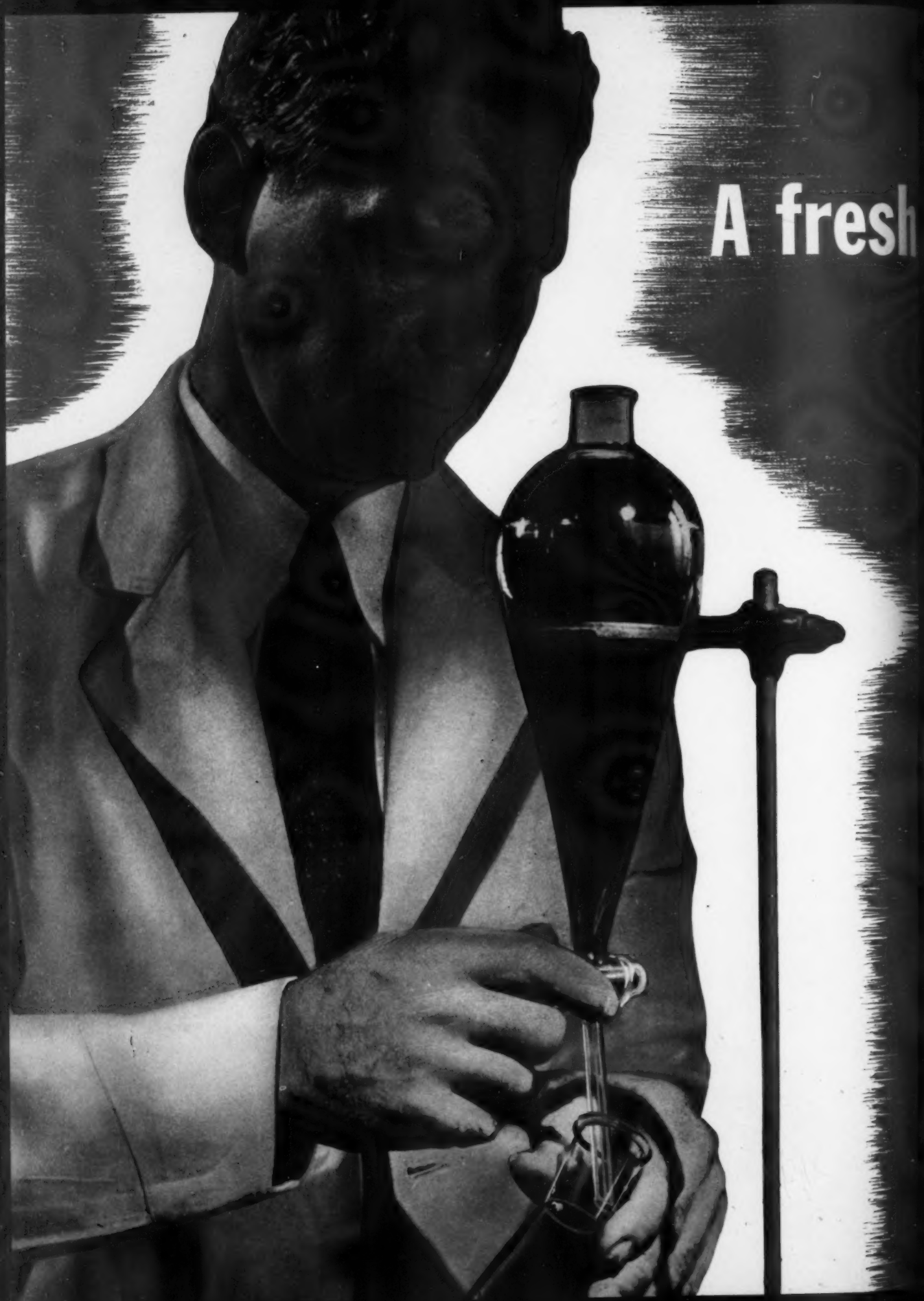
DONOR and PLASMA BOTTLES and FITTINGS

TRANSFUSION UNIT IN USE

Capillary tubes used by the million in donor centers; bottles of Kimble Neutraglas for collecting and processing blood and for containing plasma and distilled water; filter, observation and adapter tubes without which transfusions could not be made . . . all these Kimble items play essential parts throughout the process by which blood plasma saves lives.

For Assurance

• • • *The Visible Guarantee of Invisible Quality* • • •


A fresh

point-of-view

on the aromatics picture . . .

WITH PERSPECTIVE BY *Givaudan*

Already the picture of new and improved perfume and cosmetic products is taking shape. For example, certain of the materials developed by Givaudan to meet wartime needs show promise of interesting peacetime developments in new formulations. Also a gradual renewal of long-curtailed supplies of many time-proven constituents will assure a basis for broad range planning ahead. With this background and with greatly expanded laboratory facilities, Givaudan envisions dramatic innovations and improvements. We look forward to helping you create new effects in your products.

"BUY WISELY. . . BUY GIVAUDAN"

Givaudan-Delawanna INC.

330 WEST 42nd STREET · NEW YORK 18, N. Y.

Estralita

AN ALLURING FRAGRANCE RICH IN THE WARMTH AND DEPTH WHICH ONLY FINE NATURAL MATERIALS IMPART.

ORIGINAL IN CHARACTER, SUPREME IN ACHIEVEMENT.

COMPAGNIE PARENTO

INCORPORATED

CROTON • ON • HUDSON, NEW YORK

NEW YORK • CHICAGO • DETROIT • LOS ANGELES • SAN FRANCISCO
SEATTLE • PHILADELPHIA • TORONTO • MONTREAL • LONDON, ENGLAND

GEORGE LUEDERS & CO.

NEW YORK

1885

ESSENTIAL OILS
PERFUMERS MATERIALS

GEORGE LUEDERS & CO NEW YORK
GL
REGISTERED TRADE MARK

FACTORY PRODUCTS

OIL CLOVE, EUGENOL, OLIBANUM,
RHODINOL, CITRAL

427-429 WASHINGTON STREET - - - NEW YORK 13, N. Y.

BRANCHES

CHICAGO • SAN FRANCISCO • MONTREAL

REPRESENTATIVES

SAINT LOUIS — PHILADELPHIA
LOS ANGELES — TORONTO

INSIDE NEWS

MAY — PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. — 1945

Air War Blasts Way To Better Tin Containers

Meeting the needs of our fighting forces in blasting Berlin, Tokyo and Osaka is also helping in the development of tin containers. As a result, types of containers are being made today to stand up under the hardest blows expected in wartime handling.

Cans which formerly protected civilian goods now protect military matériel. Cans that contained food, beverages and paints now play their important roles as efficient containers for explosives.

Naturally, these wartime containers are built for the tough combat experiences of shock, rough handling, extreme air pressures, and corrosion from chemical elements. National Can Corporation is proud of its contribution in providing these tin containers for our fighting men... supplying them with perfectly protected ammunition and equipment. Typical of the many different types of containers made are those mentioned here.

Parachute Bomb Containers

A special protective container, which opens by means of a slip cover, was designed to enclose a parachute attached to a fragmentation bomb. Methods have been developed to maintain production and packaging at high speeds to meet service needs.

Bomb-Part Packages

Acting as a fin, the tail on an incendiary bomb controls its downward flight. The bomb, to which the tail is attached, contains an igniting agent which destroys by fire — the temperature of the bomb on contact being so high it burns right through most of the buildings hit.

The large quantities demanded by the Army required a constant high rate of production with a minimum of changes. An automatic tandem line was set up, and from the blanking operation to the clinching of the ends, a complete assembly was obtained with the least amount of handling. By this method, finished incendiary bomb tail pieces are complete for packaging within a short period of time, reducing material and handling costs as well as assembly storage.

Detonator Cans

A particular detonator is complete with salt blocks and blasting cap. The slip cover container must be — and is — air and water tight in order that the cap on the shell will not be affected by humidity and the charge can be set off when needed in combat.

Smoke Pot Containers

Smoke screens for invasions and infantry attacks are produced from a smoke pot containing chemical charges. Careful and detailed study as to ease of handling and carrying was an important consideration in designing this particular type of container. A "U" handle fastened to the plug is bound to the container by means of a metal band which permits the container to be lifted and carried by the handle without displacing the plug. To use, the band is broken and plug pulled out. Contained in the plug is a chemical agent which when ignited melts through a zinc cup located in the plug and reacts with the main composition in the can proper to emit a dense smoke for screening purposes. In case of a wind shift, the plug can readily be replaced to smother the smoke.

These and many other diversified experiences in combat have intensified National Can's research and laboratory work. As a result of developing containers to meet these different and difficult needs for protecting food and fighting equipment, National Can Corporation looks forward to a busy postwar period. It will have new and improved containers to keep good things good longer for its present and future customers. 955

Iron-Deficient Diets

Iron deficiency in the diet has caused many nutritionalists to study this problem. Animals as well as children are stricken with anemia due to lack of iron in foods grown in certain areas. This may become especially serious when only home-grown products are eaten. Just growing vegetables and fruits in soils relatively high in iron does not completely solve the problem. Agricultural workers now find that environmental conditions play an important role. In experiments with turnip greens, nitrogen fertilizer applications were found to have significantly lowered the iron, calcium, and phosphorous content of the eatable greens. However, these negative effects were associated with increased yields due to nitrogen. 956

Make Rations Good to Eat

Diet of troops in forward areas in the tropics may be deficient in thiamine, riboflavin, ascorbic acid and calcium because of a number of conditioning factors largely due to environment and the stress of service. These include various anxiety states, which affect troops in any action. In the tropical theatres there are added the effects of heat and humidity in reducing appetite, coupled with a certain lack of palatability in the food available. There is also an increase in the requirement for the protective vitamins due to unusually high carbohydrate content of the diet. Fortification with the deficient elements is suggested. The need for continued research on ways of preserving palatability is underscored in a recent report. 957

Recommended Specifications For Industrial Cleanser

It is claimed that an industrial cleanser for general use should consist of a superfatted neutral toilet soap, containing a wetting agent or synthetic detergent, and a soft scrubber which will soften or dissolve in water and will not clog plumbing. It should contain a minimum of free alkali and have a pH of 10 or less in a one per cent solution. It should contain no silica, quartz, pumice or feldspar, nor any rosin fillers or organic solvents. A typical formula meeting these specifications is as follows:

Neutral toilet soap	30 parts
Colloidal clay	30 parts
Synthetic detergent	10 parts
Lanolin	5 parts
Perfume	1 part

958

Old Lacs Reclaimed

A new process has been developed abroad for reconditioning or reclaiming old and perished lacs. It is even effective for treating materials which have become useless through storage under adverse conditions or which have been damaged through enemy action. Any shellac bleacher can carry out the process using his present equipment. The chemicals used are among the cheapest. 959

Hermetically Canned Bullets

Machine gun cartridges are now "canned" in hermetically sealed metal containers to meet adverse climatic and transportation conditions overseas. The containers are opened with a key similar to that used on coffee or sardine cans. 960

The Consumers Approve

The small cans of processed cheese with bacon added are proving popular in Army rations "as rations go," and a civilian demand is expected when bacon becomes available. The addition of bacon gives the product flavor. 961

Bacteria Thrive

Asparagus juice concentrate, which can be produced from cannery and packing house waste at a competitive price, has possibilities as a culture medium for industrial producers of useful micro-organisms. 962

Roach-Repelling Floors

A specially compounded magnesium oxychloride cement containing particles of finely divided copper powder has been found to exhibit rather unique roach-repellent properties. While the cement is definitely not toxic to roaches, these pests show a distinct tendency to avoid premises where the special cement is used as a flooring material. It is suggested for use in rooms and buildings where food is stored, sold or prepared. This cement also inhibits growth of molds and bacteria. 963

NATIONAL CAN

PLANTS: NEW YORK • BOSTON • BALTIMORE • CHICAGO • HAMILTON, OHIO • FORT WAYNE, INDIANA

Vitamin C Concentration In Grapefruit Juice

For the past four years, grapefruit has been tested for its highest vitamin C content at different stages of ripening. It was found that juice from immature fruit has the highest concentration of C, and that as the fruit ripens and becomes more juicy, the concentration of C gradually becomes weaker. However, the total value of vitamin C in mature grapefruit is greater than the total in immature fruit. This is true because, as the grapefruit becomes larger and contains more juice, its total C content also increases. 964

Sweet Potato Processing

During the processing of sweet potatoes, the peel is often removed in a hot lye bath. As the root is exposed to the air again, a discoloration develops which seriously affects the quality of the canned product. The results of a study to prevent this undesirable factor are now available. The investigators found a highly specific oxidase enzyme which caused the discoloration, but which could be inactivated if the sweet potato tissue was quickly brought to 90° C. Preheating the roots before peeling in a 50° C. water bath for 30 minutes prevented, or greatly lessened, subsequent discoloration. 965

DDT Insecticides Used Abroad

Although no insecticides containing DDT, the newly discovered insecticidal agent, are as yet available commercially on the American market, several trade named preparations containing DDT are reported in commercial use in Switzerland, England and Brazil. In the United States all DDT, except small quantities for experimental work, is going to the armed forces. 966

Small Oranges Better

Confirming earlier studies of orange quality, a recent report states that on a quality basis, the juice from small oranges average better in flavor and contain a higher vitamin C value than the larger fruit. The smaller oranges are also richer, sweeter and have more solids. 967

Spice It for Better Flavor

Coffee and cinnamon in the icing, peach jam with a dash of mace for filling, orange frosting made interesting with ginger, ground cloves in vanilla icing, and cinnamon in chocolate cake are among the mouth-watering suggestions offered to housewives and commercial bakers by a group of home economists interested in spice promotion. The suggestions are in line with the present trend away from emphasis on nutritional selling to a wider recognition of flavor as a factor in food selection. 968

Technical Topics

DDT IN PAINT — Two British paint chemists suggest that DDT, the potent insecticide, mixed with interior paints and wall finishes, will rid houses of flies and other pests. Tests have proved the practical value of the experiment. 969

OILS FROM APRICOT KERNELS—Apricot kernels are used for the production of fixed oil, volatile oil and a paste for use in confectionery. More soluble in water than almost any other essential oil, they are used in medicine for the preparation of emulsions, in soap-making and for cosmetics, as a salad oil, flavoring essence in cooking, and in the manufacture of some perfumes. 970

CANNED HAMBURGERS — The announcement by the Quartermaster Corps of the addition of hamburgers to the list of canned rations serves to emphasize the solid background of research in meat processing. 971

SWISS STEAK IN CANS — A recent patent has been issued for canning Swiss steak! 972

BODY LOUSE TOXICANT — It is reported that sesame oil and ethylene glycol ether of pinene increase the toxicity of pyrethrum as much as 100 times against the body louse. 973

HONEY — Properly aged honey develops a rich blended flavor, losing some unpleasant odors and flavors from certain wild flowers when eaten soon after production. 974

COLCHICINE — Colchicine, a drug that changes the heredity characteristics of plants by increasing the number of chromosomes per cell, can be applied effectively to wide areas by the aerosol method. 975

SEALS CONTAINER SEAMS — The reaction products of glycerine with sebacic, adipic, or suberic acid yield soft, somewhat tacky alkyd resins which can readily be used to replace rubber dispersions in compositions for sealing seams of metal containers. This is described in a recent patent. 976

DRYING OIL — A new method for producing drying oil from raw castor oil, without introducing dark color or other undesirable properties, has been developed in Great Britain. The process is a catalytic one, using either oxides of cobalt, iron, manganese, calcium and zinc or acetates of iron and manganese. The presence of an acid is not necessary. 977

ALLYL STARCH COATINGS — Coatings made from allyl starch have been shown to be hard, transparent, and highly resistant to weather, solvents, and heat. They withstand temperatures of 400° F. The freshly prepared compound is readily soluble in most paint and varnish solvents and the coating dries either by ordinary contact with the air or, preferably, by the application of heat. 978

BURNS EASILY TREATED—It has been found that burns can be treated with plastic films. These fluids are water soluble and easy to apply, and when tested on rabbits, were found to be superior to tannic acid and to weak and strong triple dye in healing power and aschar formation. 979

SURGICAL INSTRUMENT STERILIZER—Cetyltrimethylammonium bromide is said to be an excellent disinfecting and cleansing agent. It has been recommended for sterilizing dirty bowls and surgical instruments. A one per cent aqueous solution is used. It is not so suitable for hand cleansing because a small number of skin reactions have been encountered. 980

FOR HYPERACIDITY — A basic aluminum salt of aminoacetic acid (glycocoll) in white impalpable powder form mixes with water to form a suspension which does not readily separate. Experiments point to use in hyperacidity and peptic ulcer. 981

PERFUME OIL — Of interest to perfumers is an exact reproduction of the precious Bulgarian natural oil, Kazanlik Rose, now unobtainable. The new product has been tested in laboratory and commercial use, and is now available.

SKINLESS SAUSAGES CANNED — A patent was recently issued for a mechanism for filling skinless sausages directly into canning containers. 983

CANNING CHICKEN NOODLE SOUP—A patent was recently issued to a well-known food processor for a method of canning chicken noodle soup. The system covers the entire process from making the noodle dough to the sterilization of the sealed can. 984

NEW MOTOR FUEL — Paraldehyde, blended with methanol and then mixed with ordinary gasoline at a 30 to 70 ratio, constitutes a new motor fuel now being sold in Switzerland. 985

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquiries to the original source of the article. Write to National Can Corporation, 110 East 42nd Street, New York City. Please mention the number at end of article—also name of the magazine you saw it in.

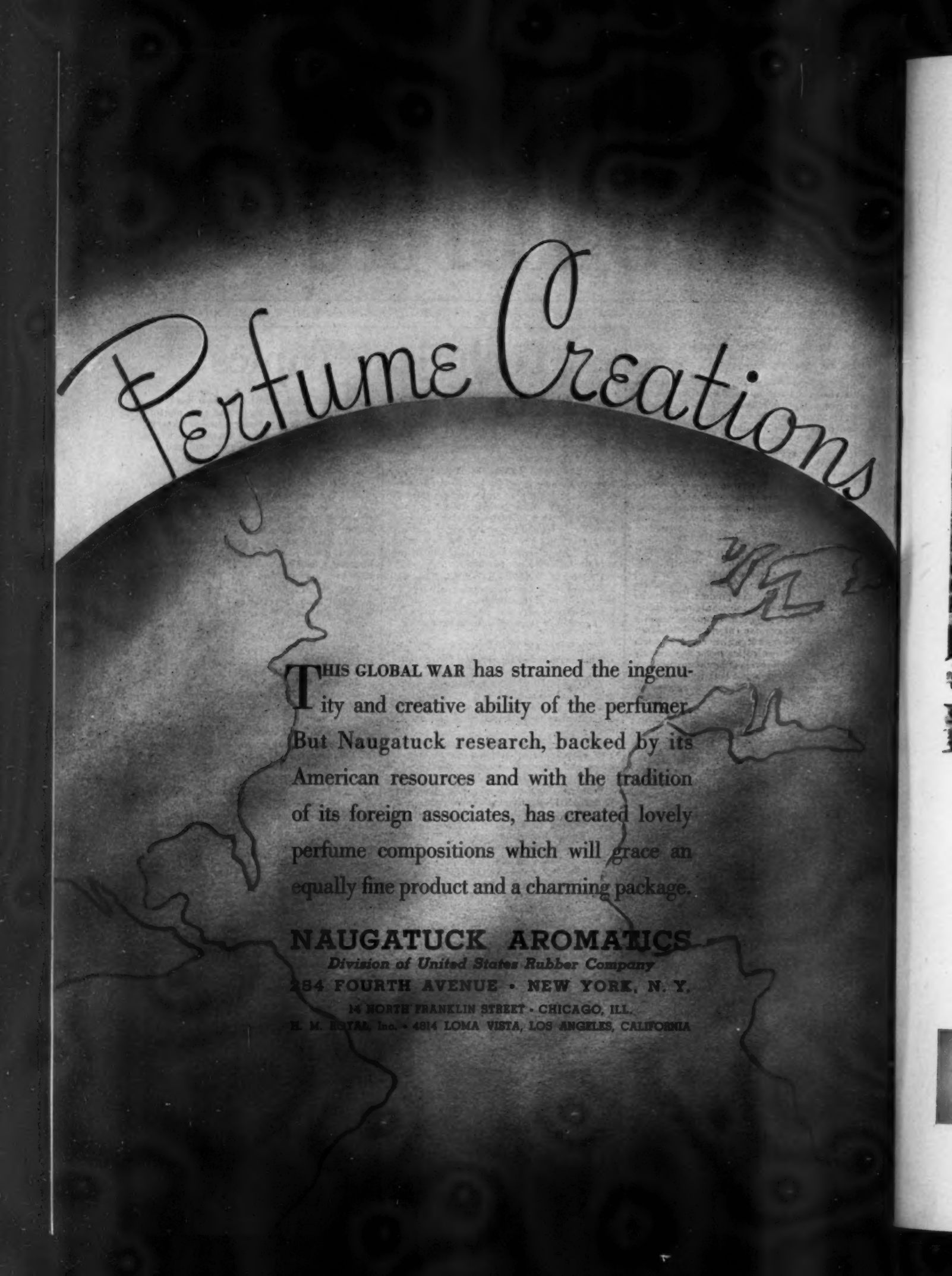
NATIONAL CAN CORPORATION

Manufacturers of

SANITARY PACKERS CANS • PLAIN AND LITHOGRAPHED CANS FOR FOODS, DRUGS, OILS, PAINTS, VARNISHES • STEEL DRUMS AND PAILS

Deliveries Subject to Priority Ratings

(*Advertisement*)


Perfume Creations
THIS GLOBAL WAR has strained the ingenuity and creative ability of the perfumer. But Naugatuck research, backed by its American resources and with the tradition of its foreign associates, has created lovely perfume compositions which will grace an equally fine product and a charming package.
NAUGATUCK AROMATICS
Division of United States Rubber Company
284 FOURTH AVENUE • NEW YORK, N. Y.
14 NORTH FRANKLIN STREET • CHICAGO, ILL.
H. M. ROYAL, Inc. • 4814 LOMA VISTA, LOS ANGELES, CALIFORNIA

CASES OF HEYDEN PENICILLIN...

To the casual onlooker just more medical material off to the battle fronts. Actually, however, the contents of these cases mean nothing less than LIFE FOR OUR FIGHTING MEN—citizens saved for long and useful lives . . . homes gladdened by the return of dear ones who might otherwise have been lost.

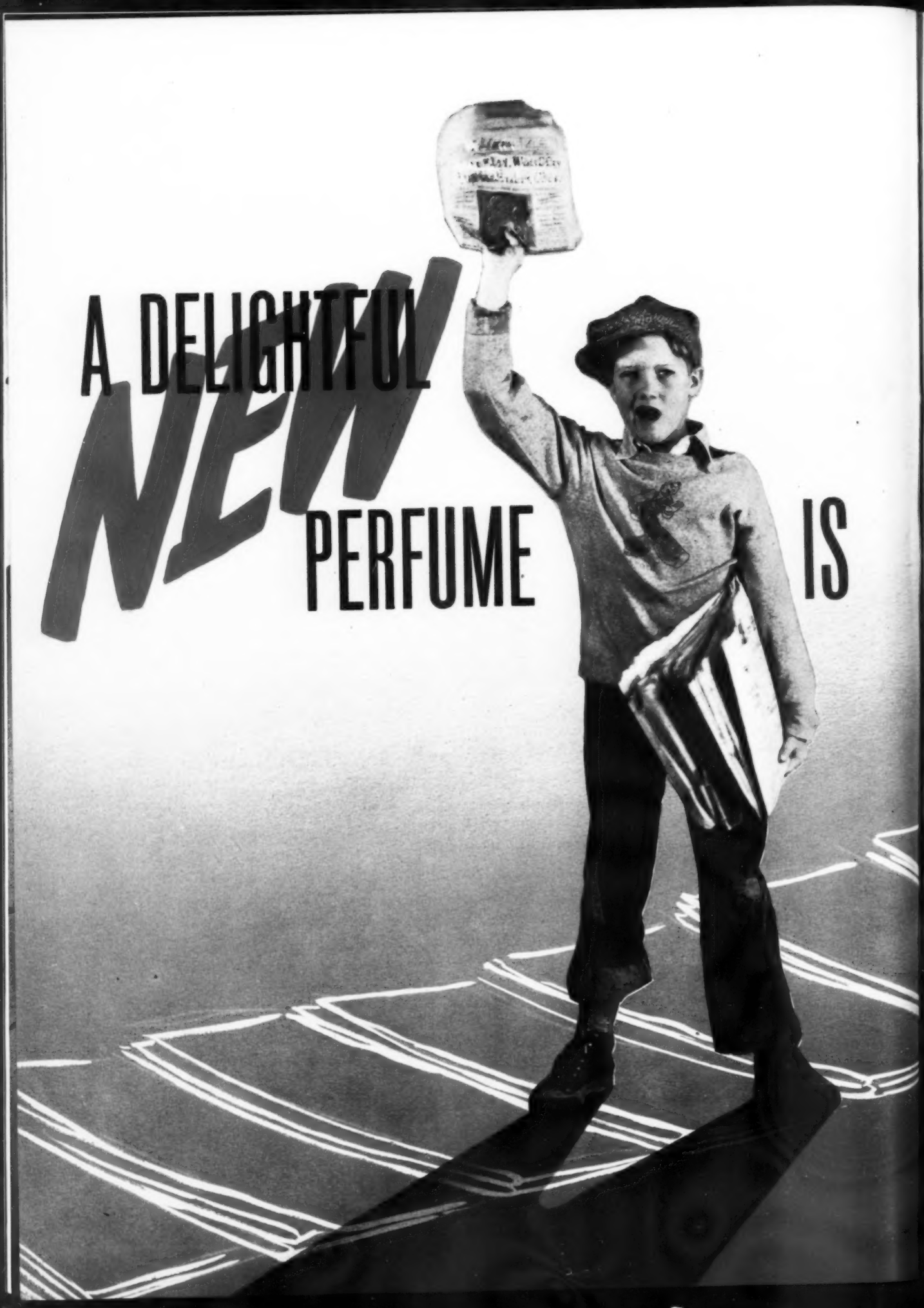
FOR CIVILIANS ON THE HOME FRONT—Over and above the needs of the Armed Forces, a substantial percentage of the Penicillin production is now available for civilian use through the distributors* of the Heyden product. Penicillin for research use is supplied direct from Heyden to the user. As a service to research laboratories and the industries, an efficient consulting staff is available for discussion of new applications of Penicillin and its derivatives.

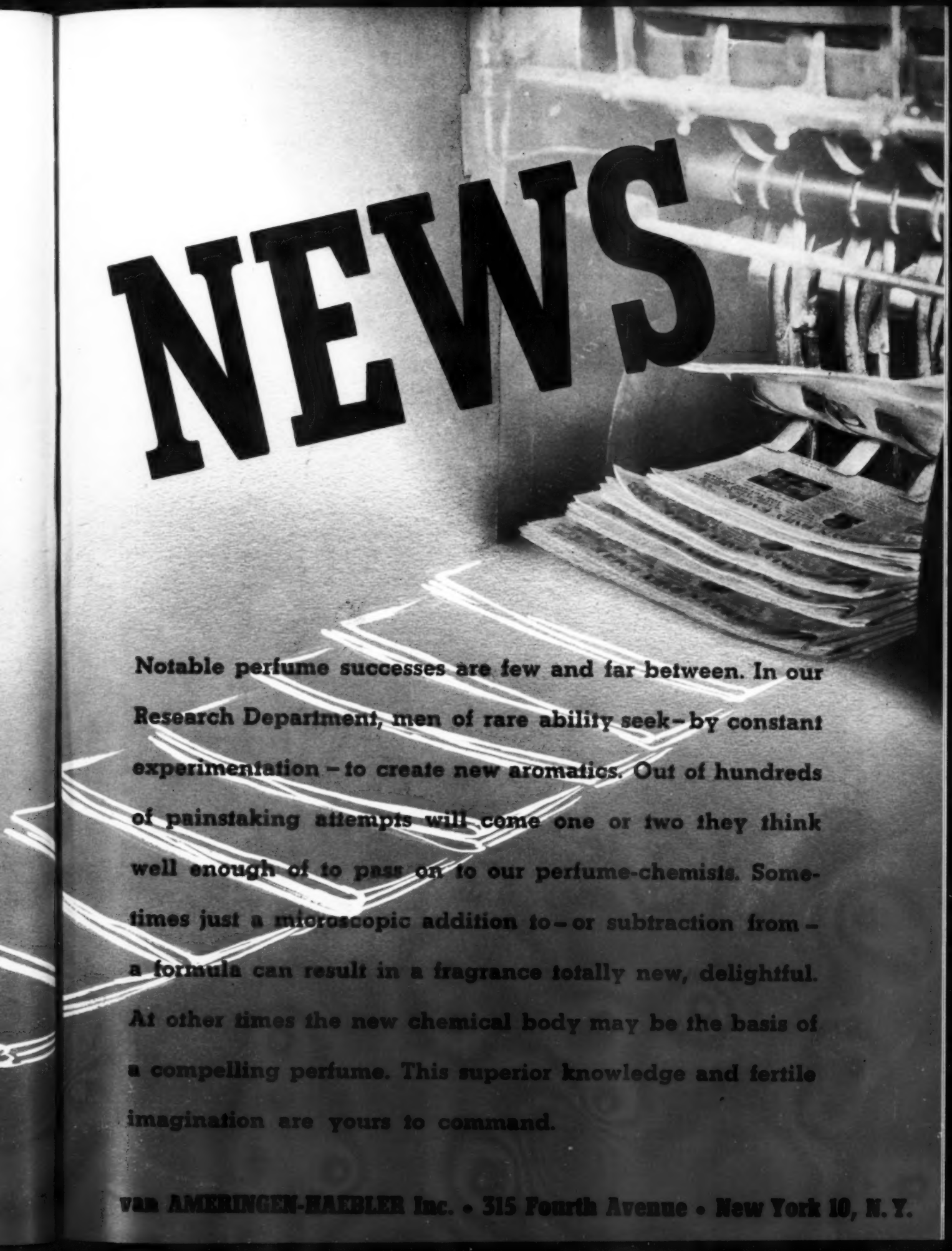
*Distributors of Heyden Penicillin in the United States sell under their own labels.

HEYDEN *Chemical Corporation*

393 SEVENTH AVENUE, NEW YORK 1, N. Y.

Benzaldehyde • Benzoates • Benzoic Acid • Benzyl Chloride • Bromides • Chlorinated Aromatics • Medicinal Creosotes • Formates • Formaldehyde • Formic Acid
Glycerophosphates • Medicinal Guaiacols • Hexamethylenetetramine • Paraformaldehyde • Parahydroxybenzoates • Penicillin • Pentaerythritols • Salicylates


A DELIGHTFUL
NEW
PERFUME
IS



Notable perfume successes are few and far between. In our Research Department, men of rare ability seek – by constant experimentation – to create new aromatics. Out of hundreds of painstaking attempts will come one or two they think well enough of to pass on to our perfume-chemists. Sometimes just a microscopic addition to – or subtraction from – a formula can result in a fragrance totally new, delightful. At other times the new chemical body may be the basis of a compelling perfume. This superior knowledge and fertile imagination are yours to command.

van AMERINGEN-HAEBLER Inc. • 315 Fourth Avenue • New York 10, N. Y.

-TIME TO LOOK

It is time to look into the future. The world is moving at a rapid pace. Be sure the odors in your products are up-to-the-minute and that they have sales appeal that will attract the modern buyer.

We particularly call your attention to the following:

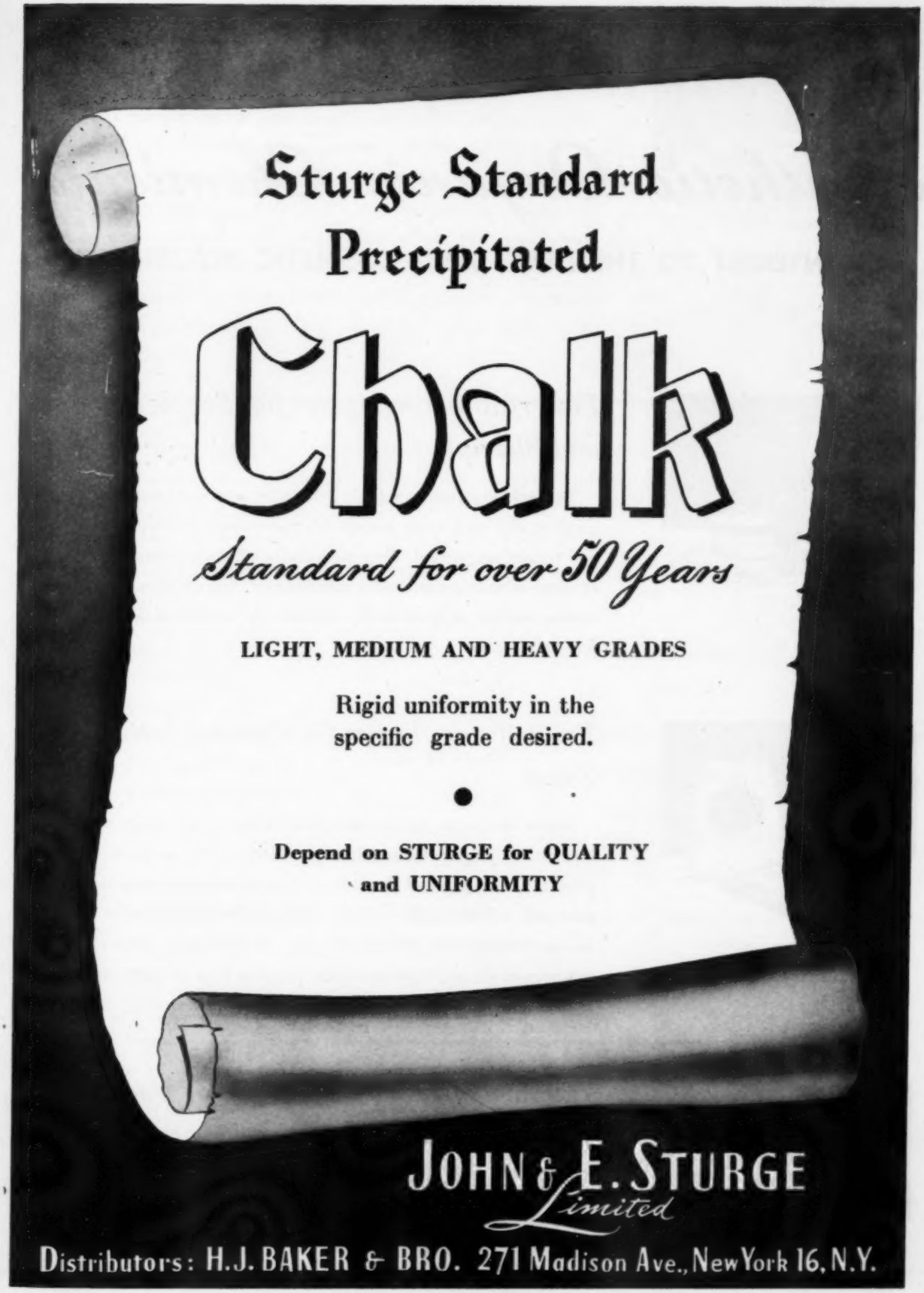
VERATRALDEHYDE
ISO BUTYL FURYL PROPIONATE
PHENYL ACETALDEHYDE DIMETHYL ACETAL
HYDRATROPIC ALDEHYDE
PARA METHYL HYDRATROPIC ALDEHYDE
CYCLAMAL
INDOL
IONONES

Also a full line of Aromatic Chemicals used for Perfumes — Soaps — Cosmetics

Requests for samples on your firm's letterhead and further information will be promptly furnished

Aromatics Division
GENERAL DRUG COMPANY
125 Barclay St., New York 7, N. Y.
9 S. CLINTON ST., CHICAGO 6
1019 ELLIOTT ST., W., WINDSOR, ONT.

FLORANOL—A Single Chemical Used in Compounding Rose Odors

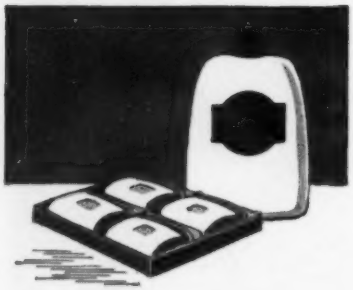

Sturge Standard
Precipitated
Chalk
Standard for over 50 Years
LIGHT, MEDIUM AND HEAVY GRADES
Rigid uniformity in the
specific grade desired.
Depend on STURGE for QUALITY
and UNIFORMITY
JOHN & E. STURGE
Limited
Distributors: H.J. BAKER & BRO. 271 Madison Ave., New York 16, N.Y.

Synthetic Organic Chemicals

OF INTEREST TO THE DRUG AND COSMETIC INDUSTRIES

Powerful Wetting Agents for "Soapless Soaps" and Shampoos.

Tergitol penetrants are highly effective even when used with acids, alkalies, and hard water and display exceptional wetting, penetrating, and emulsifying action. They profoundly influence the surface activity of water solutions, even under conditions of high dilution. These higher alcohol sulfates also markedly enhance the bactericidal properties of most antiseptics.



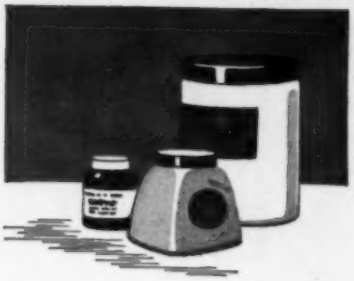
Emulsifying Agents for Creams, Lotions, and Soaps.

Stable emulsions, almost neutral in reaction and resistant to freezing, can be prepared using Triethanolamine. The soaps of this compound, having a pH of about 8, are free from irritating action on the skin and will not injure fabrics. Many other amines—for example, monoethanolamine, diethanolamine, morpholine, diethylethanolamine, and the isopropanolamines—are also used in many emulsifying applications.

Intermediates for Synthesis of Antiseptics, Perfumes, and Drugs.

Many highly reactive chemicals such as pentanedione (acetyl acetone), allyl alcohol, acetoacetic esters, ethylene amines, and acetic anhydride are raw materials in the preparation of a wide variety of pharmaceuticals and cosmetics.

Water-Soluble Bases for Ointments and Cosmetic Creams.



Carbowax compounds are chemically stable solids ranging in consistency from that of petrolatum to paraffin wax. The softening point of these water-soluble solids may be varied by blending with liquids such as the polyethylene glycols. When used in cosmetic creams, leg make-up, suntan creams, and hand lotions, Carbowax compounds impart superior softening, conditioning, and skin-smoothing qualities to these preparations. The water solubility of these compounds insures effective use of the active ingredients, controlled hygroscopicity, and ease of removal.

More than 160 synthetic chemicals are produced by Carbide and Carbon Chemicals Corporation. Of these, many are being used for a wide variety of applications in pharmaceutical preparations. A few of these uses are mentioned above and a partial listing of our products of interest to the drug and cosmetic industries is given below. For further information on any of these chemicals or their uses, write to us.

Allyl Alcohol
Methanol
Ethanol
"Synasol" Solvent
Isopropanol
Trimethylcyclohexanol
Ethyl Ether
Ethyl Acetate
Isopropyl Acetate
Acetoacetic Esters
Acetone
Pentanedione-2,4
Glyoxal
Acetic Anhydride
Ethylene Amines
Morpholine
Monoethanolamine
Diethanolamine
Methyldiethanolamine
Triisopropanolamine
Triethanolamine
Mercaptoethanol
"Tergitol" Penetrants
"Carbowax" Compounds
"Cellosize" Hydroxyethyl Cellulose WS
Polyethylene Glycols
and 135 other synthetic organic chemicals

The words "Carbowax," "Tergitol," "Synasol," and "Cellosize" are registered trade-marks of Carbide and Carbon Chemicals Corporation.

Distribution and use of these materials as components of pharmaceutical products are subject to the provisions of the Federal Food, Drug and Cosmetic Act and Regulations.

SYNTHETIC ORGANIC CHEMICALS

CARBIDE AND CARBON CHEMICALS CORPORATION

Unit of Union Carbide and Carbon Corporation

UCC

30 East 42nd Street, New York 17, N. Y.

DO YOU KNOW HOW TO MAKE UNIFORM BUBBLES?...

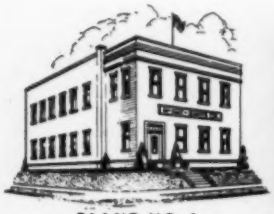
We Do!

FINE QUALITY EFFERVESCENTS
by the
D'Onofrio
PROCESS

Ever drop an effervescent tablet in a glass of water and see it dissolve in "fits and starts"? Then you know what we mean by uniform dissolution.

Manufacturing effervescent products is no job for the inexperienced, too many factors are involved, — any of which may spoil the product and directly ruin a sales campaign

If you're planning to market an effervescent product — Postwar — then it will pay you to investigate our facitities and service.



PLANT NO. 1
851 ISLINGTON STREET

McKAY-DAVIS COMPANY
MANUFACTURING CHEMISTS
TOLEDO, OHIO

PLANT NO. 2
333 WEST WOODRUFF AVE.

For the alluring odor appeal of
tropicals
. . . consult Albert Verley & Company—a complete source of aromatic materials and creative inspiration.

THE POST-WAR COMPETITIVE PACE WILL BE *faster*

—let Albert Verley & Company help you maintain your position by enhancing the odor appeal of your products.

Materials

for Tropical Odors
by Albert Verley & Company

A selection of a few of many materials in this category:

PIKAKI ROYALE	MAGNOLIA
PLUMERIA	GARDENIA
ORCHIDAL	CARNATION

•

FOREIGN REPRESENTATIVES

Maximo A. Kuderli
Rodriguez Pena 233
Buenos Aires, Argentina

Dr. Blem & Cia. Ltda.
Post Box 2222
Rio de Janeiro, Brazil

Alberto Farres
Isabel La Catolica 45, Desp. 420
Apartado 7233
Mexico, D. F.

Moller & Rothe, Ltda.
Casa Cocodan
Edificio "Rex" Oficina No. 308
Bogota, Rep. de Colombia

New types of odors—as well as new quality standards and new interpretations in the established odor groups—are certain to result from wartime progress in the development of materials and the discovery of new combinations. It is important to establish contact now with sources of new information and ideas.

It is our aim to provide such a source of the broadest scope—not only to offer a complete service in familiar fields, but also to explore new fields which are rich in romantic atmosphere and fresh possibilities . . . to make available not only materials in any desired stage of fabrication up to the finished composition, but also counsel to aid the perfumer in his constant search for new effects.

For example, the heady scents of the tropics—so familiar to travelers, yet so difficult to identify with the odor of any particular flower—have provided the inspiration for a series of highly original tropical fantasies, some of which are listed here.

This complete service and flexible viewpoint are available to you. Here, in one convenient place, you can find everything you need to give a lift to your line through enhanced odor appeal.

Consult us in confidence regarding your odor requirements—one of the most important elements in your post-war success. Call or write today.

232 EAST OHIO STREET, CHICAGO 11, ILL.
114-116 EAST 25TH STREET, NEW YORK 10, N. Y.
MEFFORD CHEMICAL CO., LOS ANGELES

Albert Verley
AND COMPANY
Headquarters for Odor Appeal
D. A. BENNETT, E. J. STROBEL (SOLE OWNERS)

Synthetic Aromatic Products & Organic Isolates • Synthetic Flower Oils & Aromatic Bases • Bouquets & Finished Composit

Staff Allen's English Distilled Oils

Character, experience and ability in the important matter of producing Quality Oils

STAFFORD ALLEN & SONS LTD.,
LONDON ENGLAND

CLOVE
LAVENDER
NUTMEG
ORRIS
PATCHOULY
PEPPERMINT
SANDALWOOD

BRITAIN DELIVERS THE GOODS

UNGERER & CO.

161 SIXTH AVE., NEW YORK 13
Philadelphia Boston San Francisco Chicago

POGOSTEMOL II

Leading manufacturers are more than satisfied with this very effective substitute for Oil Patchouly.

Replaces the genuine on a pound for pound basis.

601 West 26th Street, New York 1, N. Y.

Martin molecules are happy molecules...

Molecules at Martin Laboratories are probably the most delighted molecules you never saw. That's because they know they're in fast company. They know they will make some beautiful woman very happy. They will be part of Martin cold permanent wave solutions — complete, packaged and ready for your private label. The wonder-working TYO ingredient is in every Martin cold permanent wave solution.— **MARTIN LABORATORIES, 251-255 E. 139th St., N. Y. 51, N. Y.**

makers of **TYO** *thioglycollic acid and its derivatives • four plants throughout the country*

"Is that all you brought on our honeymoon?"

WELL, SISTER, you might as well learn now as later that an up-and-coming young druggist never gets very far away from his *Blue Price Book*.

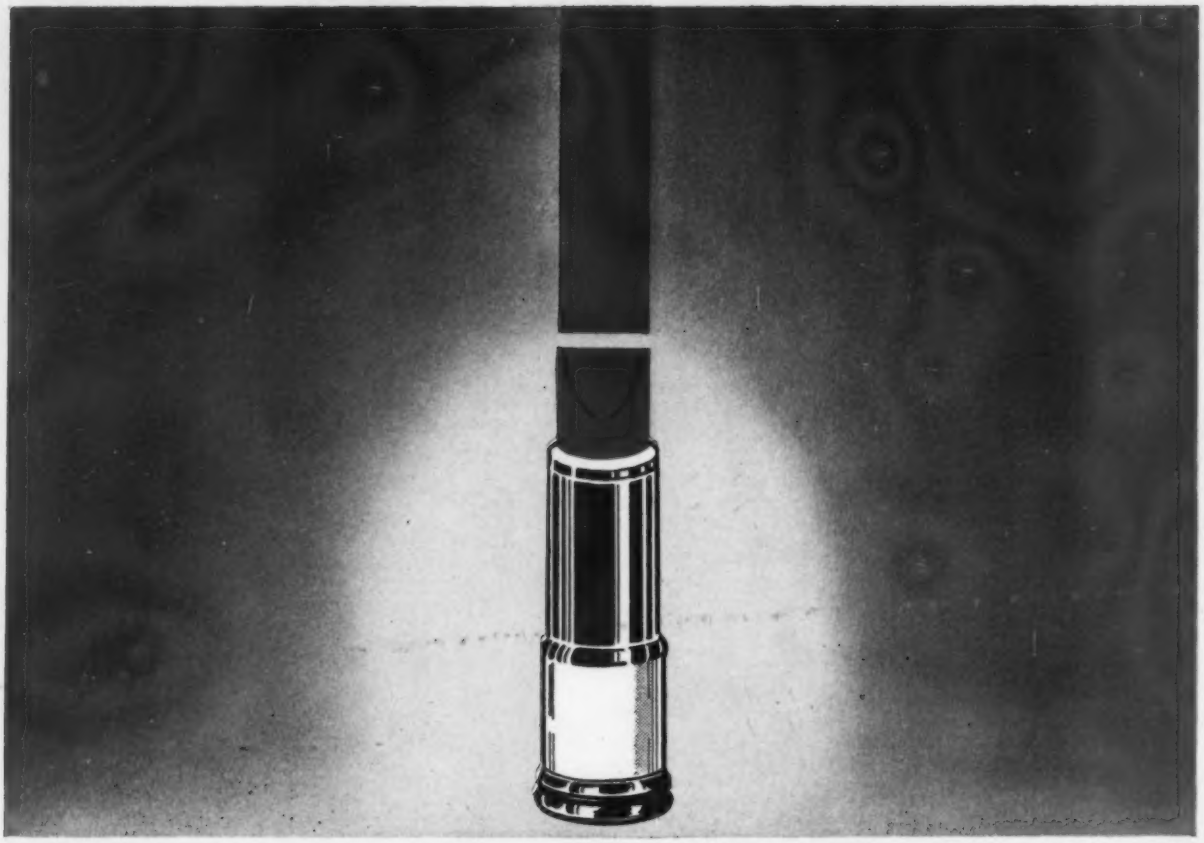
He's learned — from his first days in pharmacy college — to depend on the *Blue Price Book* for complete, authoritative information on all phases of his business and profession.

That feeling of dependability makes the *Blue Price Book* a profitable advertising medium for manufacturers of drugs, toiletries, and sundries. For full data, rates, closing dates, get in touch with the nearest American Druggist office soon.

American Druggist BLUE PRICE BOOK

NEW YORK: 572 Madison Avenue
CHICAGO: 326 W. Madison Avenue
DETROIT: General Motors Building
BOSTON: Park Square Building
ATLANTA: Rhodes-Haverty Building
SAN FRANCISCO: 509 Hearst Building

The
of your cosmetics
is
Correct Perfuming
A whisper of loveliness... a promise of ecstasy... these are but few of the infinite subtleties captured by Felton Perfumers in their creations... perfume creations which contribute so much to the success of your products.
Felton Chemical Co., Inc.
599 JOHNSON AVE., BROOKLYN, N. Y.
BRANCHES IN BOSTON • PHILADELPHIA • SAN FRANCISCO • LOS ANGELES • ST. LOUIS • CHICAGO • NEW ORLEANS • MONTREAL • TORONTO • MEXICO CITY
MANUFACTURERS OF PERFUMES, AROMATIC CHEMICALS, ESSENTIAL OILS AND FLAVORS



HELFRICH

HEADQUARTERS FOR
ONE OR A COMPLETE LINE OF
QUALITY TIME TESTED
PRIVATE LABEL COSMETICS

HELFRICH PRIVATE LABEL COSMETICS

- Rouge
- Cream Rouge
- Lipsticks
- Eye Shadow
- Face Powder
- Sachets
- Etc.
- Cake Makeup
- Mascaras
- Solid Perfumes
- Cream Cologne
- Face Creams
- Lotions
- Etc.

WHAT HELFRICH PROMISES.....HELFRICH DOES

• HELFRICH LABORATORIES, INC., 564-570 W. MONROE ST., CHICAGO • HELFRICH LABORATORIES OF CANADA, LTD., 690 KING ST., WEST, TORONTO, ONT
• HELFRICH LABORATORIES OF N. Y., INC., 151-163 WEST 26TH ST., NEW YORK • CABLE ADDRESS: HELFLABS, NEW YORK . . . CHICAGO . . . TORONTO

HELFRICH Laboratories

Today, medical science looks on broad horizons . . . conquers ancient enemies with miraculous new drugs. The creation of such drugs requires many fine chemicals: some, familiar and often used; others, developed *expressly* for advanced processes of accelerated research.

Baker & Adamson has been a leading source of fine chemicals for more than 60 years . . . a source on which you can rely with full confidence, for *quality, purity* and *uniformity* are assured in *every* B&A product by strictest manufacturing standards and unique production control methods.

Whatever your requirements—a fine chemical in commercial quantity—or one *especially developed* for you—depend on Baker & Adamson. B&A, you will find, is the *quality source* that counts most.

A few of the B & A Fine Chemicals available to drug and pharmaceutical manufacturers—

Reagent Acids and Ammonia
Acetyl Chloride
Ammonium Acetate
Ammonium Formate
Ammonium Sulfate, White, Gran.
Barium Acetate
Cadmium Acetate
Calcium Acetate, Purified
Calcium Chloride, Anhydrous
Formic Acid, 98%–100%
Fuming Sulfuric Acid, Reagent
Potassium Acetate
Potassium Cyanate
Potassium Phosphate, Mono
Salicylamide
Sodium Acetate
Sodium Hydroxide
Sodium Nitrate
Sodium Nitrite Sticks, U.S.P.
Sodium Phosphate, Mono & Di
Sodium Sulfate, Cryst. U.S.P.
Sodium Sulfite, Anhydrous
Sodium Thiosulfate, U.S.P.
Zinc Acetate

Setting the Pace in Chemical Purity Since 1882

B&A — BAKER & ADAMSON — STANDARD OF PURITY

BAKER & ADAMSON *Reagent and Fine Chemicals*

Division of GENERAL CHEMICAL COMPANY, 40 Rector St., New York 6, N. Y.

Sales and Technical Service Offices: Atlanta • Baltimore • Boston • Bridgeport (Conn.) • Buffalo • Charlotte (N. C.) • Chicago • Cleveland • Denver • Detroit • Houston • Kansas City • Los Angeles • Minneapolis • New York • Philadelphia • Pittsburgh • Providence (R. I.) • San Francisco • Seattle • St. Louis • Utica (N. Y.) • Wenatchee • Yakima (Wash.)

In Wisconsin: General Chemical Wisconsin Corporation, Milwaukee, Wis.

Above—Belladonna. This drug, grown by Penick during the war, averted a serious shortage. Penick is a dependable source of supply for Belladonna Extracts.

Stramonium—one of the many crude drugs manufactured into solid and powdered extracts by Penick, the world's largest botanical drug house.

Above—Henbane. Henbane Extracts, like others produced by Penick, are made from prime crude drugs, under the careful supervision of skilled chemists.

POWDERED and SOLID EXTRACTS

FROM THE PENICK LABORATORIES

Extracts, Concentrations, Resins and Oleoresins produced by the Penick Laboratories number approximately three hundred. Among them are:

FOR THE MANUFACTURING TRADES ONLY

BELLADONNA

Belladonna Leaves, U.S.P. Belladonna Root

HENBANE

Henbane Leaves, U.S.P.

STRAMONIUM

Stramonium Leaves, U.S.P.

We invite your inquiries and orders

S. B. PENICK & COMPANY

50 Church Street, New York 7, N. Y. Telephone: COrtlandt 7-1970

735 W. Division Street, Chicago 10, Ill. Telephone: MOHawk 5651

BUY WAR BONDS AND STAMPS . . . FOR VICTORY

INDOLINE

Not a substitute for INDOL but a product superior in

LASTING QUALITY
SWEETNESS and
PERFUME VALUE

Please Write for Free Sample

Norda

ESSENTIAL OIL AND CHEMICAL COMPANY, INC.

NEW YORK OFFICE
601 WEST 26TH STREET

CHICAGO: 325 W. HURON STREET
LOS ANGELES: 2800 E. 11TH STREET
ST. LOUIS: 1123 WASHINGTON AVE.
FRANCE: PLACE VENDOME, 8, PARIS
ST. PAUL: 253 E. 4TH STREET
HAVANA, CUBA: AMARGURA 160
CANADA: 119 ADELAIDE ST., W. TORONTO
135 COMMISSIONERS ST., WEST, MONTREAL
ENGLAND: 17 CREECHURCH LANE, LEADENHALL ST., LONDON, E. C. 3

QUALITY
INTEGRITY
SERVICE

QUALITY

Constant adherence to formulas, whether our customers or our own, holds the customers who depend on us — and we on them. Only highest quality of ingredients used in all products.

INTEGRITY

Honesty always brings its reward. This is the real reason for the continued confidence the finest cosmetic distributors have in us.

SERVICE

Consistent with existing conditions we make prompt shipments.

EMOLLIENT LIPSTICKS

CREAMS » » » LOTIONS

POWDERS » » » PERFUMES

COLOGNE

Manufacturers* • *Packagers

W. F. Zimmerman, Incorporated

[Two Plants]

404 Fourth Avenue
New York 16, N. Y.

605-635 So. 21st St.
Irvington, N. J.

NOW . . . AVAILABLE!

Creem
COLD WAVE
Lotion

L&K CREEM COLD WAVE LOTION is an emulsified solution containing beneficial oils that assure more thorough penetration of the hair, so necessary for successful cold waving. The hair is left softer and curls are kept moist throughout the waving process. Easier to use, it allows the operator to work at greater speed and results in a better curl.

CREEM COLD WAVE LOTION is manufactured by a technique that insures consistent quality at all times. We manufacture, bottle, package and affix your label according to specifications. Write at once for prices and samples of our famous Creem Cold Wave Lotion.

L&K
LABORATORIES

Foot Schulze Building, St. Paul 1, Minn.

All products made by L & K Laboratories are fully covered by Product's Liability Insurance

CALCO can supply you Certified Colors

For more than 25 years CALCO has held prominent place as a maker of fine *Colors* for the textile, leather, paper, paint and other color-using industries.

Leading manufacturers in these industries with most exacting color requirements have long been accustomed to turn to CALCO for colors of highest, uniform quality.

While CALCO is chiefly known in the pharmaceutical field for the excellence of its synthetic, medicinal chemicals, its reputation as a front-rank color manufacturer is equally wide and well-established.

This reputation has been largely the outgrowth of these two important facts:

1st. CALCO is basically sound as to raw materials for intermediate and color productions.

2nd. CALCO is unusually competent through its long-experienced technical staff to serve pharmaceutical manufacturers . . . with advice and guidance on their *Certified Color* problems.

If you have need for such *Certified Colors* and such technical service now, it will pay you to communicate with CALCO.

For Your Bulletin and Price List Address:

Pharmaceutical Department
CALCO CHEMICAL DIVISION
AMERICAN CYANAMID COMPANY
BOUND BROOK Calco NEW JERSEY

The Foremost Name in Bulk Nail Enamel

There have to be sound reasons for *Durlin's* world wide reputation as the foremost name in bulk *Nail Enamel.* Much better reasons than a superior uniform product, a proven reputation for alertness in research, a modern factory manned by personnel experienced in nail lacquer production.

Durlin's reputation lies in a customer service that has paid big dividends to the many users of their *Nail Enamel. Durlin* color sense, shown by an early awareness of fashion trends, selection of colors and aid in packaging has many times helped customers to that "extra edge" which brings success.

When you think of *Durlin Nail Enamel,* think also of *Durlin Service.*

DURLIN CO.

744 Broad Street — Newark 2, N. J.

★

CUSTOMERS GET ONLY MICRO-ANALYZED TALC IN

Kolmar COSMETICS

● These photomicrographs of talc show how carefully Kolmar selects its customers' talc for private label cosmetics. Every shipment of talc that comes to Kolmar is tested in their own laboratories for microstructure, water and oil absorption, slip, bulk, whiteness, and freedom from large, jagged particles that have an abrasive effect on the skin.

Kolmar unexcelled facilities make possible this exacting laboratory control. It is assurance that your Kolmar-made rouge, powder, cake make-up and other cosmetics will have that uniform high quality that will build and maintain high favor with your trade. Kolmar markets no brand cosmetics under its own name.

THE PROOF

These photomicrographs from Kolmar files show the difference between good and poor talc.

Plate No. 1 shows poor talc containing large chunks with jagged, abrasive edges and sharp particles.

Plate No. 2 shows good quality talc with an abundance of small, soft, uniform oval particles—satin smooth quality that soothes the skin.

MAKE THIS TEST: Place a small quantity of any Kolmar Talc product between two pieces of glass and rub together. Notice the absence of "squeek" which indicates friction and scratching.

REPRESENTATIVES: M. C. BOYD, DOUGLAS HAGGERTY, EMPIRE STATE BUILDING, ROOM 605, NEW YORK, N. Y.; WARREN M. CURRY, 350 NELSON STREET, S. W., ATLANTA, 3, GA.; NORMAN KOLE, 955 MERCHANDISE MART, CHICAGO, ILL.; R. F. G. BYINGTON, 1200 N. WESTERN AVE., LOS ANGELES, CALIF.; RICHARD F. SPICKER, 419 WEST FIFTH ST., CINCINNATI, OHIO

Kolmar LABORATORIES

PRIVATE LABEL COSMETICS EXCLUSIVELY

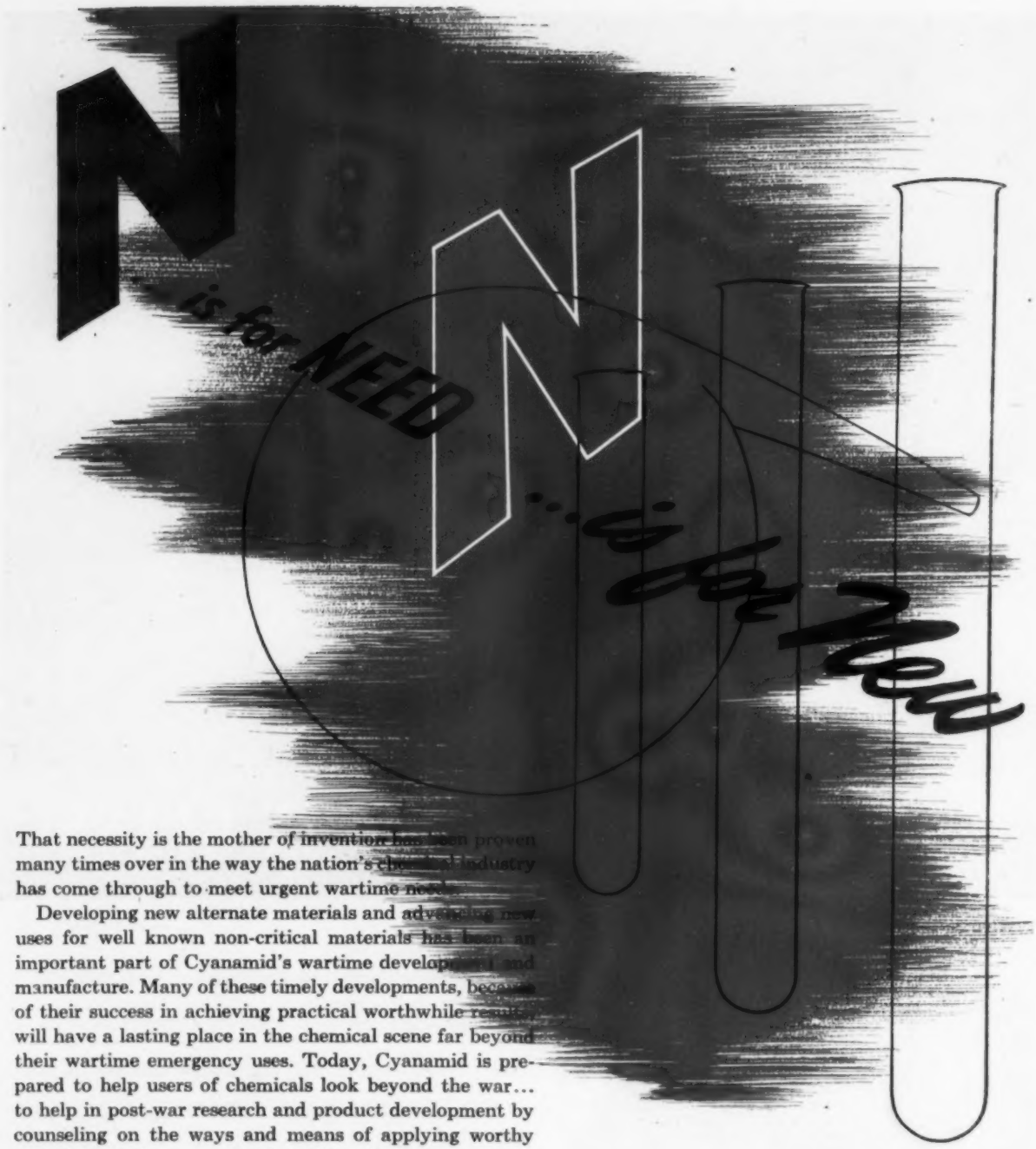
THREE PLANTS IN MILWAUKEE, WISCONSIN • OTHERS IN PORT JERVIS, N. Y.; ELLENVILLE, N. Y.; NEWARK, N. J.

YOUR PRODUCT *lives* IN GLASS

LIKE rare, effervescent champagne bubbling in a sparkling goblet, your product comes alive in the crystal clarity of Maryland bottles and jars. If your postwar plans include repackaging, we will be glad to send you samples of the smart stock designs in Maryland Glass.

PACK TO ATTRACT IN *Maryland Glass*

MARYLAND GLASS CORPORATION, BALTIMORE . . . 270 Broadway, New York 7 . . . Berman Bros., Inc., 1501 S. Laflin St., Chicago 8 . . . H. A. Baumstark, 4030 Chouteau Ave., St. Louis 10 . . . J. E. McLaughlin, 401 Lock St., Cincinnati 2 . . . Owens-Illinois Glass Co., Pacific Coast Division, 135 Stockton St., San Francisco 19 . . . Aller Todd, 1224 Union Avenue, Kansas City 7 . . . S. Walter Scott, 608 McCall Building, Memphis 3.



That necessity is the mother of invention has been proven many times over in the way the nation's chemical industry has come through to meet urgent wartime needs.

Developing new alternate materials and advancing new uses for well known non-critical materials has been an important part of Cyanamid's wartime development and manufacture. Many of these timely developments, because of their success in achieving practical worthwhile results, will have a lasting place in the chemical scene far beyond their wartime emergency uses. Today, Cyanamid is prepared to help users of chemicals look beyond the war... to help in post-war research and product development by counseling on the ways and means of applying worthy materials, both new and old, to the solution of post-war product plans.

AMERICAN CYANAMID
& CHEMICAL CORPORATION
(A Unit of American Cyanamid Company)
30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

DISTRICT OFFICES:

BOSTON, MASS. • PHILADELPHIA, PA. • BALTIMORE, MD.
CHARLOTTE N. C. • CLEVELAND, OHIO • CHICAGO, ILL.
KALAMAZOO, MICH. • DETROIT, MICH. • ST. LOUIS, MO.
AZUSA, CALIF.

NEW!

HYACOL

HYACOL is a new synthetic FLORAL FIXATIVE with a basic SWEET PEA note.

HYACOL is a distinctive base for Floral and Fantasy fragrances For COLOGNES, PERFUMES, CREAMS, POWDERS, ETC.

HYACOL is $16.00 per pound.

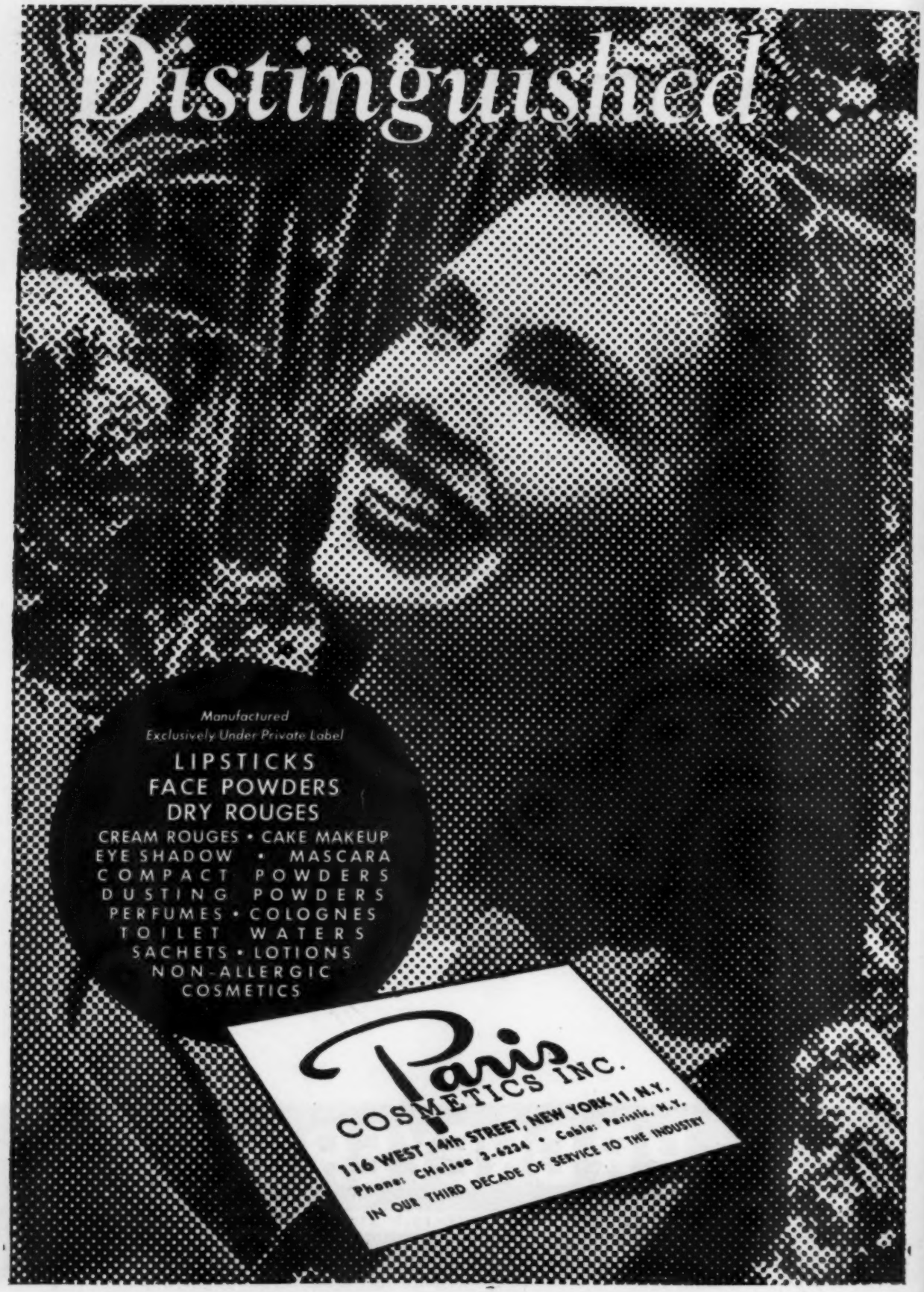
DREYER

P. R. DREYER INC.

119 WEST 19th STREET

NEW YORK, N.Y.

DREYER


Distinguished...
Manufactured
Exclusively Under Private Label
LIPSTICKS
FACE POWDERS
DRY ROUGES
CREAM ROUGES • CAKE MAKEUP
EYE SHADOW • MASCARA
COMPACT POWDERS
DUSTING POWDERS
PERFUMES • COLOGNES
TOILET WATERS
SACHETS • LOTIONS
NON-ALLERGIC
COSMETICS
Paris
COSMETICS INC.
116 WEST 14th STREET, NEW YORK 11, N.Y.
Phone: CHelsea 3-6234 • Cable: Parisin, N.Y.
IN OUR THIRD DECADE OF SERVICE TO THE INDUSTRY

HERE'S THE TALC YOU'VE BEEN LOOKING FOR

Yes, those strange looking objects on the powder puff are made from talc . . . but they are talc in a different form from the $H_2Mg_3(SiO_3)_4$ familiar to you of the cosmetic industry. They are electronic insulators.

One of the properties of talc, with which you are not usually concerned, is *high ohmic resistance* which means it is a good non-conductor of electricity. For this reason, certain grades of our talc supply have been drafted into government service in the manufacture of insulators.

But here's good news! Only the grades of talc suitable for this purpose have been drafted. We at *Whittaker* have other grades available, along with other cosmetic ingredients which we have been supplying the industry for more than half a century.

ALBATEX • STEARATES • COSMETIC TITANIUM • MAGNESIUM CARBONATE • COLLOIDAL KAOLIN • PRECIPITATED CHALK • COLORS

EST. WHITTAKER 1890

Whittaker, Clark & Daniels, INC.

260 West B'way, New York 13, N. Y. • Plant: South Kearney, New Jersey

SALES REPRESENTATIVES

CHICAGO — Harry Holland & Sons
NEW ORLEANS — Edward W. Ortenbach
PHILADELPHIA — Peltz & Company
TORONTO & MONTREAL — Richardson Agencies, Ltd.
CLEVELAND — Palmer Supplies Co., formerly Palmer Schuster Co.

YOUR PRODUCTION TOMORROW

ARE YOU A COSMETIC MANUFACTURER with a small business because your facilities are so limited? Have you an eye to the future . . . quick to see expansion through private label production?

FORWARD-LOOKING distributors are meeting their manufacturing requirements by entrusting their production to us . . . knowing that their formulas are well-guarded.

OUR VAST RESOURCES and facilities will speed-up your production today . . . adequately expand it to meet the challenge of a bigger business tomorrow.

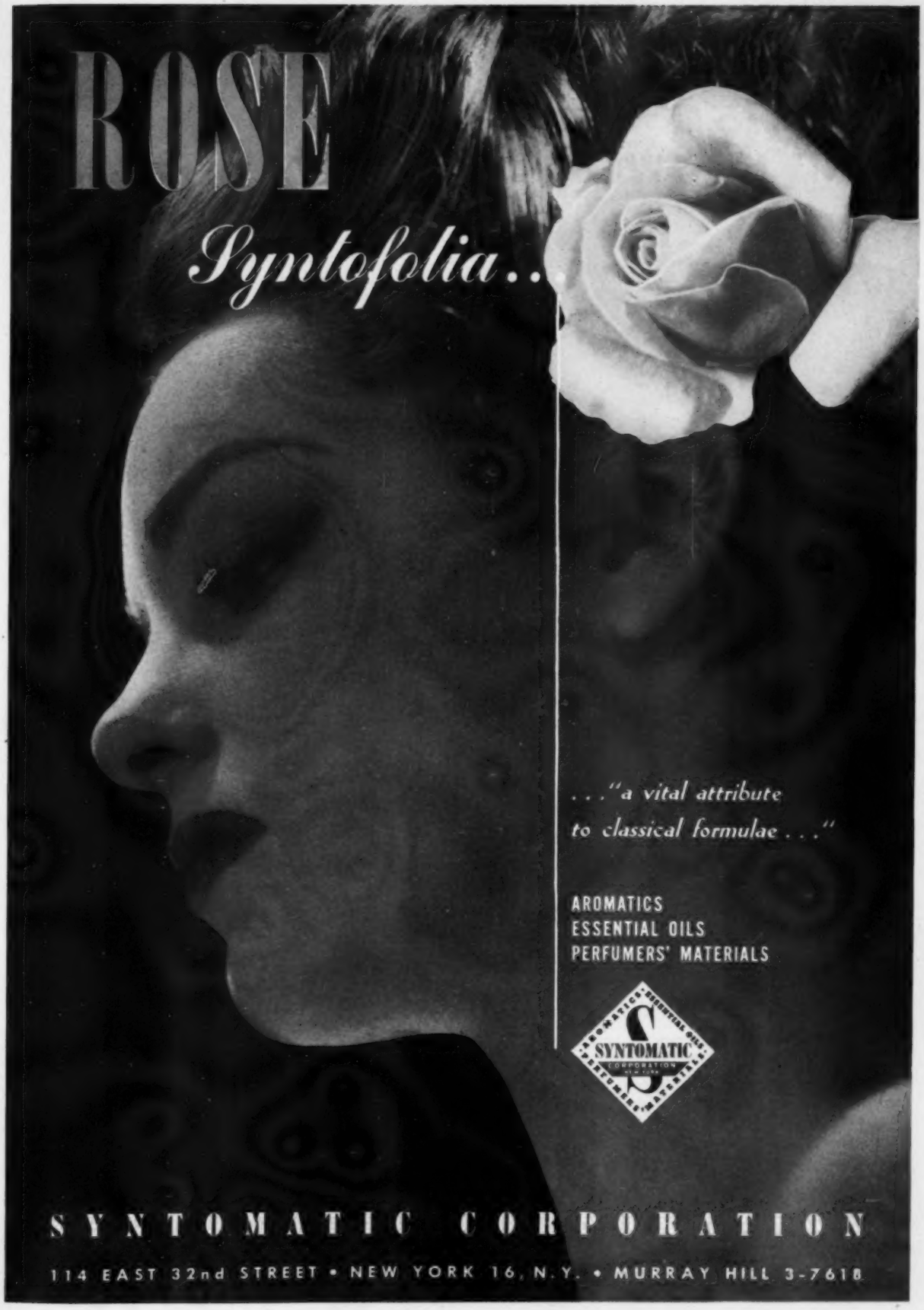
COME IN and have a friendly chat with us about your formulation, manufacturing and production problems. We'll be glad to help you.

EVANS CHEMETICS, INC.
250 East 43rd Street, New York
Telephone: Murray Hill 3-0077

EVANS CHEMICALS, LTD.
Boreham Wood, Herts, England
For your English post-war production

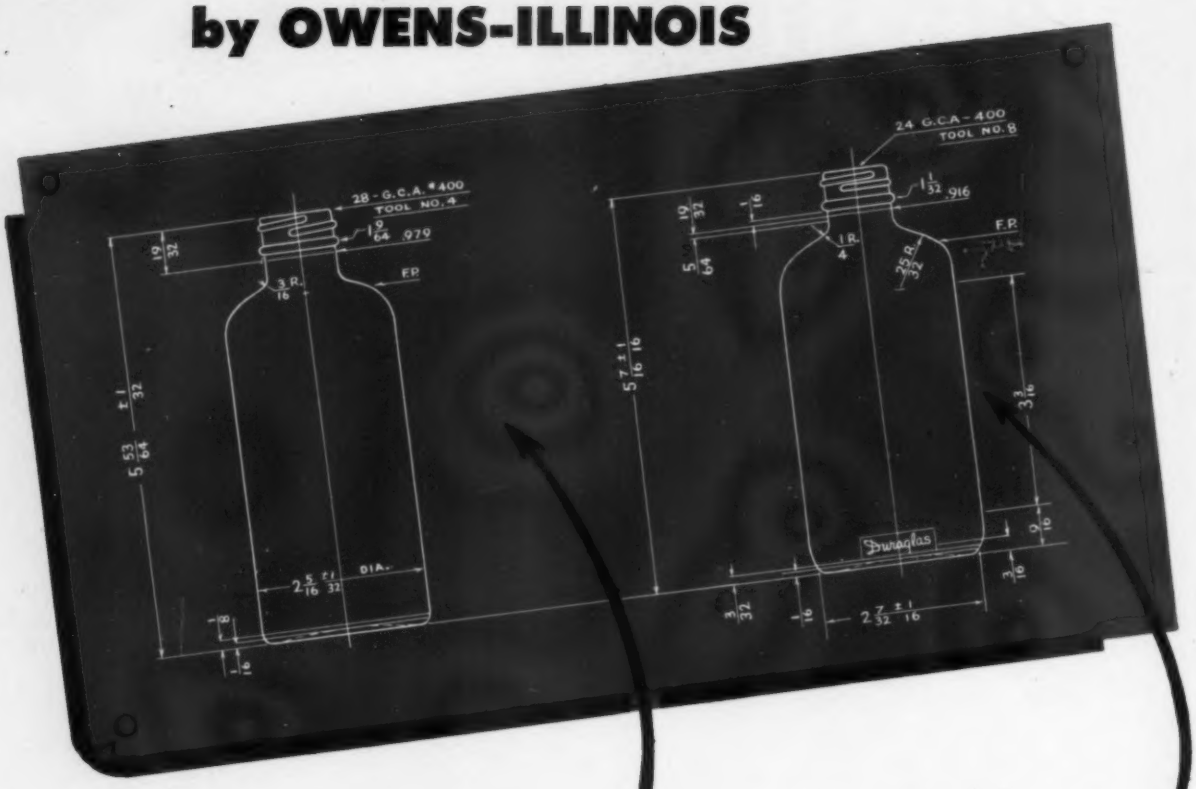
★ *(Manufacturing Chemists with Unique Research Facilities)* ★

Now More Than Ever
BUY WAR BONDS


ROSE
Syntofolia...
. . . "a vital attribute
to classical formulae . . ."
AROMATICS
ESSENTIAL OILS
PERFUMERS' MATERIALS
SYNTOMATIC
CORPORATION
SYNTOMATIC CORPORATION
114 EAST 32nd STREET • NEW YORK 16, N.Y. • MURRAY HILL 3-7618

BOSTON ROUNDS

by OWENS-ILLINOIS



WHAT THEY WERE WHAT THEY ARE

...what they mean to you

BOTTLE PROGRESS at Owens-Illinois is not measured by decades or generations. It moves forward by years, months and days.

As it moves, its achievements are made available.

For example, we illustrate the progress made by re-engineering the famous Boston Rounds.

Re-engineering reduced its height, its weight . . . created more graceful shoulders . . . increased its strength while decreasing the amount of glass.

The modern Owens-Illinois Duraglas Boston Round is the ideal bottle for liquids. It is built for efficient handling in automatic machinery and high-speed labelers. You can get it in Amber, Flint or Emerald Green.

The eye appeal and display ability of these handsome sturdy bottles make them favorite containers for many products . . . give your products positive protection. Consult us for the details of the advantages you gain when you pack your products in Duraglas Boston Rounds.

OWENS-ILLINOIS GLASS COMPANY
TOLEDO 1, OHIO
Branches in All Principal Cities

Enjoy a "Lift to Living" that is a "Lift to Selling" products packed in Duraglas Containers—Fred Waring and his Pennsylvanians over the Blue Network from coast to coast every Thursday Evening—10 p.m. E.W.T.—9 p.m. C.W.T.—8 p.m. M.W.T.—7 p.m. P.W.T.

Duraglas
TRADE MARK REG. U.S. PAT. OFF.
CONTAINERS
Protectors of Quality

THEY MASTERED *Chemistry* TO HELP SOLVE YOUR COLOR PROBLEMS

In recent years the Drug & Cosmetic Industry has made great strides in improving the color and appearance of its products. The House of H. KOHNSTAMM & COMPANY, INC. is proud to have played a part in this field of science.

The Laboratories of H. KOHNSTAMM & COMPANY, INC. have contributed greatly to this progress by means of its exhaustive research work and constant practical testing. These laboratories are long established and modern, and are staffed by Chemists who are specialists in the Drug and Cosmetic Fields.

The services of these Kohnstamm laboratories and technicians are always at your command—without obligation. We offer expert help and guidance on your Cosmetic color problems.

THE ATLAS LABEL PROTECTS YOU · STRENGTH · UNIFORMITY · PURITY · H. KOHNSTAMM & CO. INC. · NEW YORK · CHICAGO · ESTABLISHED 1851 ·

ATLANTA · BALTIMORE · BOSTON · CINCINNATI · CLEVELAND
DALLAS · DETROIT · HOUSTON · INDIANAPOLIS · KANSAS CITY, MO. · MINNEAPOLIS · NEW ORLEANS · OMAHA
PHILADELPHIA · PITTSBURGH · ST. LOUIS · SAN FRANCISCO

H. KOHNSTAMM
& COMPANY, INC.
ESTABLISHED 1851
89 PARK PLACE • NEW YORK-7
11-13 E. ILLINOIS ST. • CHICAGO-11
4735 DISTRICT BLVD. • LOS ANGELES-11

FIRST PRODUCERS OF CERTIFIED COLORS

Carnation

SYMBOL OF MEMORABLE OCCASIONS

Add the spicy fragrance of "Carnation Supreme" to your products

The clean, fresh note of the Carnation flower is particularly American for it is characteristic of some of our most memorable days. For this reason, the Carnation has always been one of the most popular fragrances. Use the spicy piquancy of our "Carnation Supreme" to add delicate, yet long-lasting loveliness to your cosmetics and toiletries.

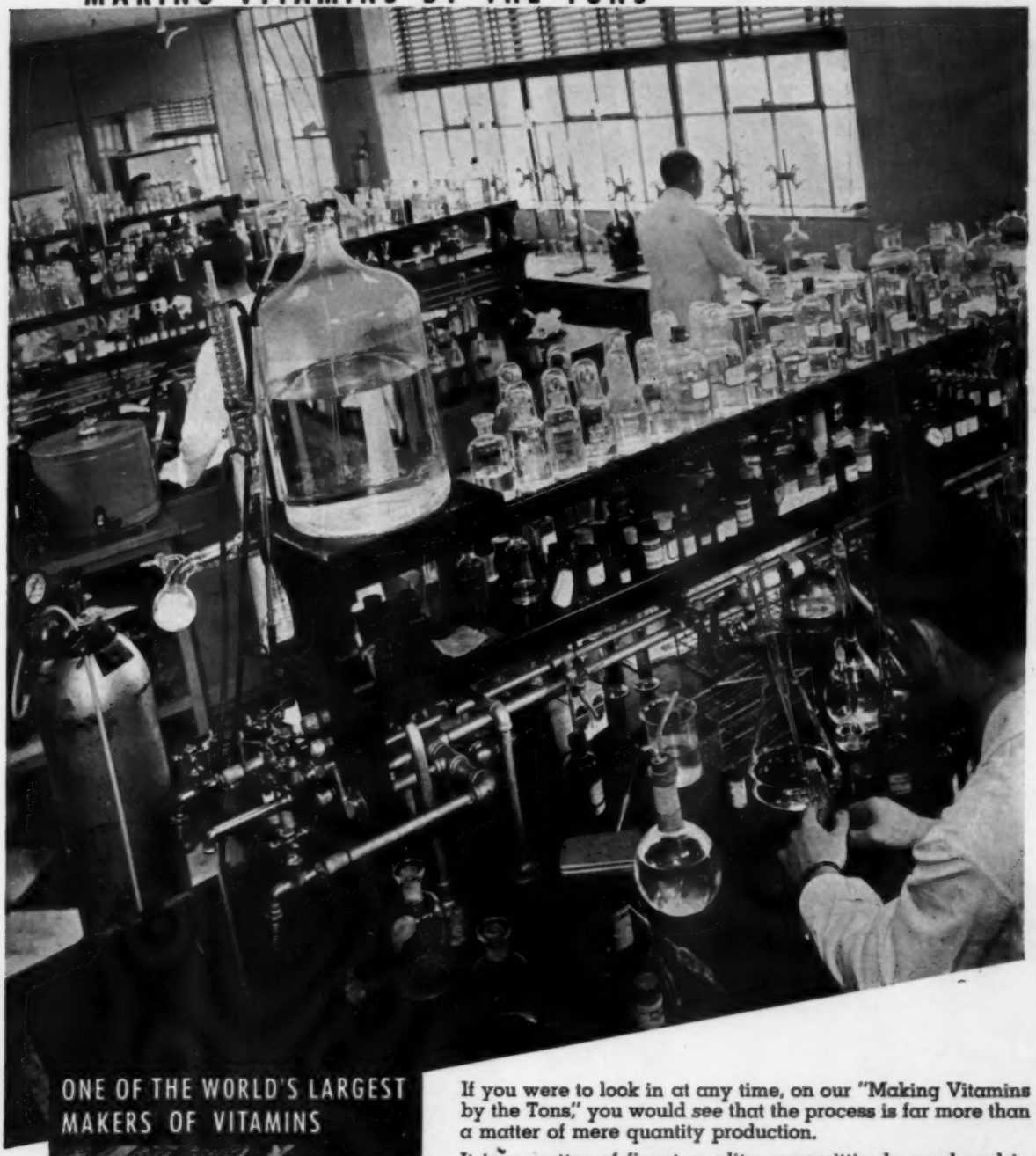
We'll be glad to send you samples of "Carnation Supreme" for your own products. Write us for "Carnation Supreme" for Cologne, Hand Lotion, Cream, Powder, Bath Salts, Bath Oils, Soap, Sachet and Pomade.

AROMATIC PRODUCTS, Inc.

15 EAST 30th ST., NEW YORK 16, N. Y.

ATLANTA • PITTSBURGH • CHICAGO • MEMPHIS
DALLAS • LOS ANGELES • SAN FRANCISCO

MAKING VITAMINS BY THE TONS



ONE OF THE WORLD'S LARGEST MAKERS OF VITAMINS

If you were to look in at any time, on our "Making Vitamins by the Tons," you would *see* that the process is far more than a matter of mere quantity production.

It is a matter of finest *quality*, unremittingly produced in quantity. That involves many delicate micro-assays and other precision tests—as conducted, for example, in this one of the multiple Roche control laboratories.

In addition to tests described in the U. S. Pharmacopoeia and other guides, are some devised by our own chemists, to whom many years of exclusive experience in vitamin work have revealed important fine points in maintenance of quality control.

See that the vitamins going into your pharmaceutical products come from Roche Park. Technical data and quotations gladly supplied.

ROCHE

Vitamin Division

HOFFMANN-LA ROCHE, INC., Roche Park, Nutley 10, New Jersey

World Famous for Fine Pharmaceutical Chemicals

CONSTANT RESEARCH

Determination of comparative melting points in the Merck Research Laboratories.

MANUFACTURING EXPERIENCE

Fine chemicals for the professions and industry since 1818.

MERCK

has the right combination for fine Cosmetic Chemicals

TO guarantee a uniform product of highest quality, extreme precautions are taken to select the best raw materials available and to carry out the various purifying and manufacturing processes under proper control.

Definite testing routines make certain that Merck Chemicals conform to rigid standards of purity and uniformity before they are released for sale.

LABORATORY CONTROL

One of the unique "Merck Cross Tables" in the Merck Analytical Laboratories.

SCIENTIFIC PACKAGING

A corner of the Merck Container Laboratory.

Speed the Victory with War Bonds

We invite you to consult us regarding your manufacturing problems and requirements.

MERCK & CO., Inc. *Manufacturing Chemists* **RAHWAY, N.J.**

New York, N. Y. · Philadelphia, Pa. · St. Louis, Mo. · Elkton, Va. · Chicago, Ill. · Los Angeles, Cal.

In Canada: MERCK & CO., Ltd., Montreal and Toronto

SINCE 1865

- **ESSENTIAL OILS**
  of highest quality
- **PERFUME COMPOUNDS**
  for every purpose
- **FRUIT FLAVORS**
  all types
- **CERTIFIED COLORS**
  food and cosmetic

YOUR INQUIRIES SOLICITED

Tenemos catalogo y lista de precios en castellano y con gusto se la enviaremos.

ESCRIBANOS

James B. Horner Inc.

ESTABLISHED 1865

215 PEARL STREET, NEW YORK 7, N. Y.

PERFUME COMPOUNDS, COLORS, FLAVORS, WATER SOLUBLE GUMS
AROMATIC CHEMICALS, ESSENTIAL OILS, OLEORESINS, ETC.

A TIP FOR THE "400" OF THE TOILETRIES WORLD . . .

For definitely "upper strata" perfumes and toiletries, Magnus, Mabee & Reynard, Inc., have perfected the "500" line — a group of exciting odors worthy of bearing the finest labels. ☆ The MM&R "500" line runs the gamut of exquisite fragrances . . . from the tenderly sweet and flowery to the flagrantly spicy; from sophisticated modern odors to strikingly unusual scents of a definitely new character. ☆ Each member of the "500" is a superlative bouquet of long-lasting quality, and can be blended by MM&R perfuming chemists into an endless variety of distinctive fragrances. To meet the individual requirements of the toiletry world's "400" — it's the MM&R "500" line.

You are invited
to participate in the debut of
MM&R's
"500"
LINE OF PERFUME OIL EXCLUSIVES
To add sales appeal to your line, arrange to discuss your requirements with MM&R's perfuming chemists today.

M&R MAGNUS

MAGNUS, MABEE & REYNARD, INC.

SINCE 1895 . . . ONE OF THE WORLD'S GREATEST SUPPLIERS OF ESSENTIAL OILS

16 DESBROSSES STREET, NEW YORK CITY • 221 NORTH LASALLE STREET, CHICAGO

[illegible] • Los Angeles Drug Corp. • Seattle, Portland, Spokane: Van Waters & Rogers, Inc. • Canada: Richardson Agencies, Ltd., Toronto

Amazingly faithful reproduction of the floral absolute that has established Florasynth ABSOTYPES as a distinctive family of primary essentials in the creation of superior perfumes and toiletries.

Florasynth LABORATORIES, INC.

CHICAGO 6 · NEW YORK 61 · LOS ANGELES 27

DALLAS · DETROIT 2 · MEMPHIS · NEW ORLEANS 13 · ST. LOUIS · SAN FRANCISCO 3 · SEATTLE 4

Florasynth Labs. (Canada) Ltd. — Montreal · Toronto · Vancouver · Winnipeg Florasynth Laboratories de Mexico S. A. — Mexico City

BEAUTY PROGRESS

This charming little enameled Battersea Box was carried by the ladies of the 18th century filled with tiny stars, dots, crescents of black courtplaster ..."beauty patches" to enhance the whiteness of their skins by contrast.

BY SUCH artifice did the beauties of another day contrive to heighten their allure. The illusion of a healthy, clear skin was induced by contrast with the little black "beauty patch!"

Times have changed. The deathly pallor which was once fashionable has given place to the "healthy glow." But feminine nature is unchanged. The modern woman, like her ancestress, spares no effort to live up to the current beauty standard and modern aids to beauty are precision products of chemical science.

Tomorrow promises great improvements in the art of the cosmetician as wartime developments in many fields become available to our industry. We, at Allied, are ever alert to adapt new ingredients and processes to product improvement when their merits have been demonstrated. Our experiences and findings are available for discussion (in relation to YOUR postwar plans.) Drop in to see us, or, on invitation, we will be happy to call upon you. Appointments may be made at the Allied Office in the R. C. A. Building, Radio City, New York.

ALLIED PRODUCTS INC.

30 ROCKEFELLER PLAZA, N. Y. C.

Private Brand Specialists • Makers of the World's Finest Cosmetics and Toiletries

Plant and Laboratories • Suffern, New York • Middletown, New York • 1015 St. Alexander St., Montreal, Quebec

Parmantheme

A truly remarkable synthetic version of the natural Parma-Violet note!

This Chuit, Naef specialty embraces all the most desirable characteristics of the ideal Violet basic note. It is non-irritating—*contains no methyl heptine carbonate*—very fresh and tremendously powerful.

PARMANTHEME can be used in any type toilet preparation, being particularly effective in lipsticks, creams and perfume extracts.

Additional Data and Quotations on Request

Firmenich & Co.,

135 FIFTH AVE., NEW YORK • Chicago Office: 612 NORTH MICHIGAN AVE.

EXCHANGE ORANGE OIL

First in America for Orange Flavor

Give it all your tests for *quality*, *uniformity*, and *strength*. The results speak for themselves! You'll find Exchange Oil of Orange puts more *real orange flavor* in your products than any other orange oil.

Because it's made only of fruit from the "Sunkist" groves of California... in the largest orange products plant in the world... accepted and reordered by men and women who know orange flavor.

Copyright, 1945, California Fruit Growers Exchange, Products Dept.

Distributed in the United States exclusively by

DODGE & OLCOTT COMPANY
180 Varick Street, New York, N.Y.

FRITZSCHE BROTHERS, INC.
76 Ninth Avenue, New York, N.Y.

Distributors for

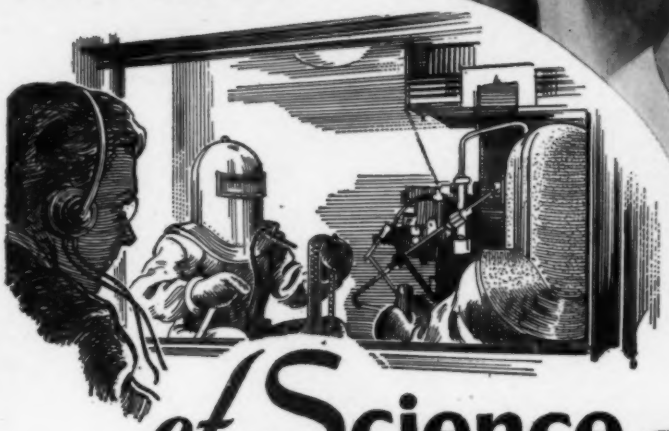
CALIFORNIA FRUIT GROWERS EXCHANGE
PRODUCTS DEPARTMENT, ONTARIO, CALIF.

Producing Plant:
THE EXCHANGE ORANGE PRODUCTS CO., ONTARIO, CALIF.

Exchange

OIL OF
ORANGE
U. S. P.

Ever abreast



# of Science and Research

For years, N.Y.Q. has been among the leaders in carrying on scientific research. Constant daily research assures the customers of N.Y.Q. that our products are constantly analyzed to assure highest quality — and to control manufacture from raw materials into finished substances. This is why so many customers have confidence in products carrying the N.Y.Q. label.

NYQ

Symbol of Quality

GENERAL OFFICES
99-117 North Eleventh St.
Brooklyn 11, N. Y.
ST. LOUIS DEPOT
915 Market Street
St. Louis 1, Mo.

HIGH FASHION *Colors*

ON THE *lips* OF THE MOST BEAUTIFUL WOMEN IN THE WORLD

Certified
COSMETIC COLORS
for LIPSTICKS, ROUGES
NAIL POLISHES
•
INORGANICS
•
TITANIUM DIOXIDE
"Inquiries Solicited"

Ansbacher-Siegle
CORPORATION
Manufacturers of Fine Chemical Pigment Colors
General Offices, Works, and Laboratories
ROSEBANK, STATEN ISLAND, NEW YORK, N. Y.
Boston, Chicago, Los Angeles, Cleveland, Detroit, San Francisco,
Richmond, Toronto, Can.

LILAC 60

by Synfleur

An exceptional Lilac in
the low price field . .
adapted for creams,
. . extracts and . .
. . . . powders . . . .

$6.00 per pound

Established **1889**

SYNFLEUR SCIENTIFIC LABORATORIES, INC.
REG. U. S. PAT. OFF.
MONTICELLO, N. Y.

New York
Atlanta
Detroit
Chicago

Havana
Mexico, D. F.
Buenos Aires
Rio de Janeiro

America's No. 1 Choice Because It's 5 WAYS BETTER

MALMSTROM NIMCO BRAND LANOLIN

WHAT SINGLE INGREDIENT has magical consumer appeal? You'll find the answer waiting for you in the corner drug stores of America. Preference for products enriched with LANOLIN is overwhelming!

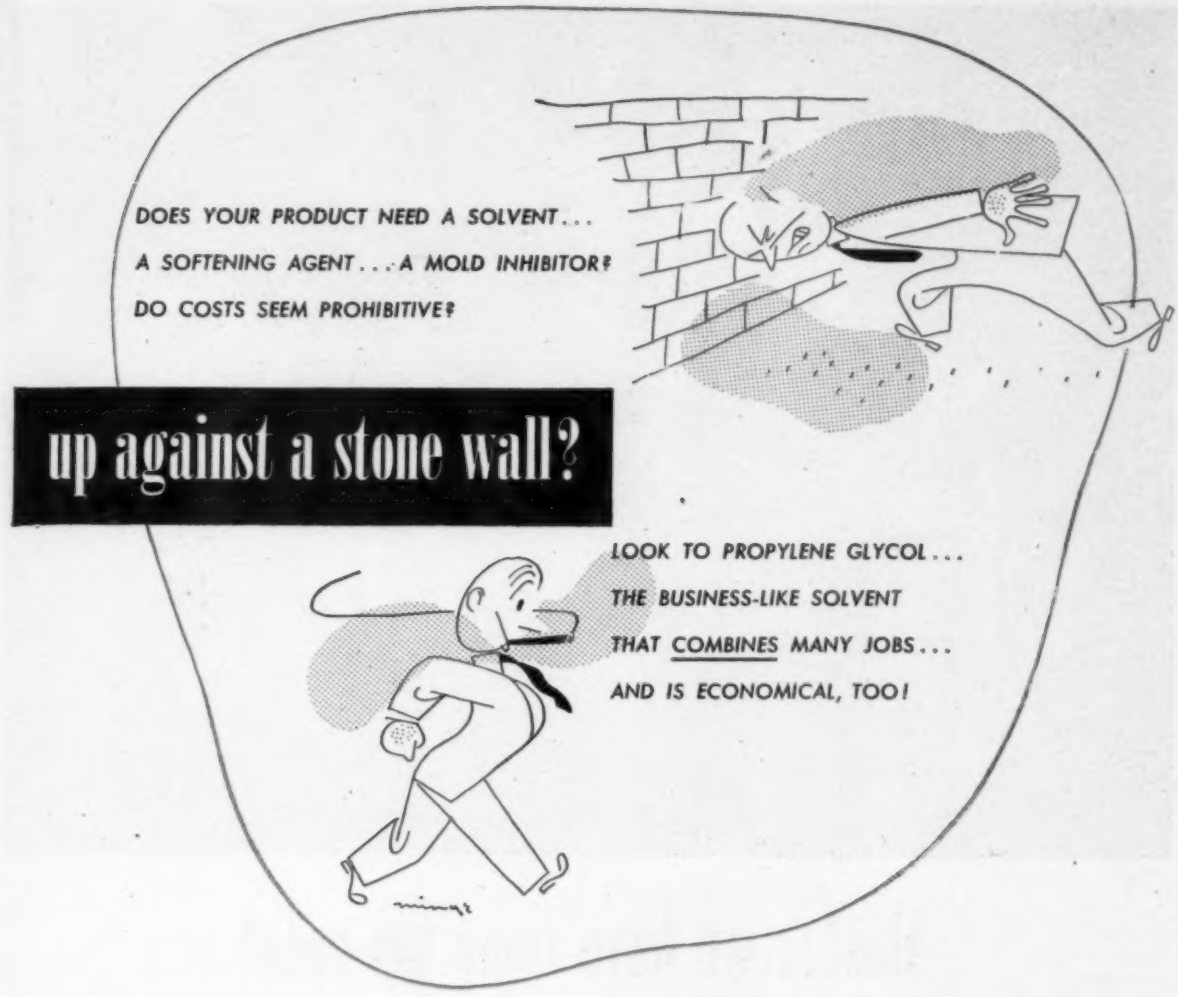
In the words of a neighborhood druggist, "We recommend as more beneficial the toiletry that contains lanolin. Customers accept it more readily, and some even *ask* for a product that contains lanolin."

The cue for post-war profits is clear! Start experimenting with Malmstrom's Nimco Brand Lanolin today. Yours for the asking are testing samples — and the know-how that has made Malmstrom "America's Largest Supplier of Lanolin."

N. I. MALMSTROM & CO.

America's Largest Suppliers of { **LANOLIN** • Anhydrous U.S.P. • Hydrous U.S.P. • Absorption Base • Technical
DEGRAS • Neutral and Common • Wool Greases

147 LOMBARDY STREET • BROOKLYN, NEW YORK


DOES YOUR PRODUCT NEED A SOLVENT...
A SOFTENING AGENT...A MOLD INHIBITOR?
DO COSTS SEEM PROHIBITIVE?
up against a stone wall?
LOOK TO PROPYLENE GLYCOL...
THE BUSINESS-LIKE SOLVENT
THAT COMBINES MANY JOBS...
AND IS ECONOMICAL, TOO!

Dow Propylene Glycol, n.f.

Are costs holding up that new product of yours? Do all the materials it calls for—solvent, softening agent, preservative—threaten to send your expenses sky-high? Dow Propylene Glycol may be your answer . . . the *single* economical ingredient that can do several important jobs at once.

Not only is Propylene Glycol an excellent solvent for many substances . . . it also inhibits mold growth, retards drying out, and acts as a softening agent. It has antifreeze properties, improves the texture and "feel" of many products, serves as a carrier and penetrant for flavors. Of National Formulary purity, Dow Propylene Glycol may be included in preparations for internal use.

This efficient material may help to cut your costs, simplify your process and improve your product. Dow's informative free booklet gives the complete details about Propylene Glycol. Send for your copy today!

DOW

CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit
Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle

Alas!...we have come too soon!

As LATE as the eighteenth century, it was believed there were three kinds of lead —ordinary lead, tin, and bismuth.

Miners thought that of the three, bismuth had progressed furthest in its "transmutation" into silver. According to one account, when they struck a vein of bismuth they exclaimed: "Alas, we have come too soon!"

The suggestion that bismuth is a specific metal was first advanced by Georgius Agricola as early as the sixteenth century. But the fact that it is an element was not clearly recognized until the researches of Pott and Geoffroy in the eighteenth century.

Since 1867, every bismuth compound bearing the MALLINCKRODT trade mark has maintained strict conformity to MALLINCKRODT'S tradition of fine chemicals. Always specify MALLINCKRODT Bismuth Subcarbonate, Subgallate, Subnitrate, Subsalicylate, Beta-Naphthol, Chloride, Citrate, Oxide, Salicylate, etc.

MALLINCKRODT CHEMICAL WORKS

FOR VICTORY BUY UNITED STATES WAR BONDS STAMPS

78 Years of Service to Chemical Users

Mallinckrodt Street, St. Louis 7, Mo. • 74 Gold Street, New York 8, N. Y.

CHICAGO • PHILADELPHIA • LOS ANGELES • MONTREAL

"Now that Europe is liberated, gentlemen, the inhabitants of that continent will again be able to enjoy the full life that comes only from constant use of Dinklepopper's Pills."

KEEPING POSTED

Vitamins Again Supported

DESPITE all the attacks made on the use of vitamins, the medical profession and others know full well that these products produce real results when they are needed and when they are properly administered. The basic objection that these people have to vitamins is the widespread exploitation of these important products which exploitation results in promiscuous use. However, the fact remains that there are not enough vegetables, milk, and other foods produced in the entire country to give everyone their full requirements of vitamins and the addition of the synthetic and other vitamins in concentrated form are absolutely essential to supplement the amount of vitamins consumed in foods. And as much as the medical profession and others try to damn vitamins and drive the public away from their use unless under a doctor's orders, the more attention is paid to authentic reports attesting to the benefits to be derived from their use. As an example of these reports, the *Los Angeles Times* of April 23, published the following report under the heading of "Vitamins Aid Warworkers:"

"Scientifically administered vitamin-mineral diet supplements resulted in higher work performance, reduced absenteeism and the equivalent of a 4 per cent gain in manpower at Lockheed Aircraft Corp., Burbank, it was announced yesterday by the California Institute of Technology.

"The announcement was based on results of the rigidly controlled, large-scale experiment on industrial efficiency of workers in relation to diet, conducted jointly by the Pasadena Institute and the National Research Council's Committee on the Nutrition of Industrial Workers.

"Subjects for the tests were young volunteers with no evidence of nutritional deficiencies. For a year's period the subjects were given supplements of vitamins A, D, B complex, and C, as well as calcium carbonate and synthetic niacinamide—in capsules and pills twice a day, five days a week, and in amounts of from two to five times larger than those of a normal 'good' diet.

"Psychological 'lift' was produced during the early part of the experiment, while the lasting physiological effects built up slowly and were not fully evident until from four to six months. Final results were estimated strictly on work performance data, subjective reports of the workers being discredited.

"Conservative estimates of over-all production gains gave the diet supplements credit for increasing each man's output 10.5 working days per year, which corresponds to a 4.1 per cent gain in manpower."

Amino Acid Activity

JUST when you begin to get excited about some new trend in drug use, someone always throws a damper upon your enthusiasm. Last December we published an article entitled "Vitamins On The Spot," in which we concluded with the observation that amino acids were to be the coming thing in the drug business and that pharmaceutical manufacturers were actively engaged in developing these products to take up the slack that should occur due to a leveling off or decline in the sale of vitamins. Incidentally, (and with usual becoming modesty which we don't like too well) the article in the May issue of *Fortune* on "The Vitamin Industry" concluded with the same observation. However, watching the development of tryptophane—one of the important amino acids synthesized by two chemical concerns, noting that this particular amino acid appears to be capable of preventing tooth decay, seeing organized medicine begin a rather extensive campaign against possible exploitation of the amino acids by the drug manufacturers, we were certain we were on a hot trail. We mentioned our enthusiasm to a very ardent admirer of vitamin preparations only to have him look us straight in the eye and say: "But you can get all the amino acids you need at the grocer's for a dime, just eat a piece of cheese and you've got all you need. And will you tell us who can't assimilate a little cheese?" Then he continued on his favorite subject and said: "But you can't get vitamins that easy." We just don't believe him. He can't do that to us. We know that amino acids are going places and we are going to ride them.

Dr. Binger on Socialized Medicine

IN HIS book, "The Doctor's Job" which received the 1945 Norton Medical Award offered to encourage the writing of books on medicine and the medical profession for the layman, Dr. Carl Binger, a practicing physician has some very interesting things to say about socialized medicine. In the first place he says "There is no use babbling about free choice (of physician) where none exists. It does not, as a rule, exist in families whose annual incomes are below two thousand dollars. In normal times more than half the families in the United States fall into this group."

Dr. Binger refutes the argument that "no country which has permitted the federal subsidy of medicine has thereafter produced scientific work of any consequence" by citing Pavlov's work "which went on all through the darkest days of the Russian Revolution," the researches of Kaiser Wilhelm Gesellschaft supported by the Kultusministerium in Germany resulting in the discovery of such drugs as avertin and the sulfa derivatives, Sir H. H. Dale's studies in pharmacology supported by the National Research Council and all the important work done in England on influenza.

Dr. Binger says further:

"Medicine has more to give than people are able to receive; just as with food, about half the population of the world suffers from malnutrition—if not from actual famine—in the face of plenty. As yet our social organization has not kept pace with the requirements of science.

"It has been estimated that the average cost for complete medical care lies somewhere between $25.30 and $66.97 per person per year. In 1930 the annual outlay for medical care (exclusive of dentistry and drugs) for all income groups averaged only $16.86 per person. Approximately $8.00 per person were spent by families earning under $1,200, as contrasted with $82 by families earning $10,000 or more.

"Now in normal times roughly 50 per cent of all American families have incomes of less than $3,000. Average incomes per family for 1928 (before the crash) were given as $2,116; for 1939, $2,267.

"Families with incomes of $4,500 can usually manage to meet the cost of severe illness by drawing on savings or by borrowing—it is stated that 30 per cent of all personal loans are made to cover the cost of illness. Families whose incomes lie between $4,500 and $2,000 can pay usual costs but cannot meet emergency expenses. Those with incomes of $2,000 to $750 cannot meet ordinary costs, or are barely able to do so. Families existing on less than $750 must obviously be taken care of at the public expense.

"Looking at the problem in broad terms, the trouble seems to be that although medicine has fine wares to sell, they cost too much, and that therefore vast numbers of persons cannot afford to buy them. The rich can buy them; the poor get them for nothing or almost nothing, but the office worker, farm hand, factory employee, school teacher, small shopkeeper, often get inferior goods or go without. Some provision is necessary to insure medical care for the masses."

Speaking about the much disputed Wagner-Murray-Dingell Bill, Dr. Binger says:

"It is not my intention here to cast a ballot. I am not appalled by the social implications of the bill. I doubt the wisdom, however, of instituting so far reaching a reform by an act of Congress when we are as yet so inexperienced in the administration of medical care on a large scale. I should favor further experimentation with different methods of payment for services and the acquisition of more experience. We are greatly in need of intelligent leadership in this field and of codifying the facts that we are accumulating.

"The adoption, with perhaps some modifications, of a plan such as Mayor LaGuardia has promulgated for New York City seems to me a step in the right direction. He has set up a non-profit corporation under the laws of the State of New York. It is governed by a board of directors composed of representative laymen and physicians. Membership in the plan will be open to all who live or work within the City of New York. It will be subscribed to by groups, and the benefits will be available to everyone who earns up to five thousand dollars a year. The plan will cover 'normal as well as catastrophic illness.' It will include home, office and hospital care, specialist service, all diagnostic procedures, surgical operations, maternity care, preventive examinations and visiting nurse service. The total charge will be approximately 4 per cent of the employees' wages, at least half to be paid by the employer and the balance to be paid by the employee. All qualified physicians will be invited to participate, so that the patient will have the widest possible choice of doctor. The physicians' salaries, it is claimed, would range from six thousand to fifteen thousand and up to twenty thousand dollars for the key men."

Foreign Travel

IF ANYONE in this country intends going to France for business reasons he should be certain that he has the proper connections in France which can guarantee him lodging, transportation and food while he is there, unless his mission comes under War Department sponsorship. And even the U. S. Army can do little for a traveler in southwestern France, since in this locality the Army has no facilities for assurring gasoline, board, or lodging, and trips to that area present special problems even to those having military sponsorship. Government sponsorship facilities obtaining transportation to France, but military sponsorship is absolutely necessary after one arrives. This is especially true outside Paris. In Paris, an official mission will be furnished lodging and meals at a hotel requisitioned by the Army, but private businessmen must shift for themselves. Connections with French firms are of great aid, but these connections must be confirmed before arriving.

Only very limited transportation in Paris can be provided even for official missions, although the Paris Metro (subway) functions and necessary calls in the city are not too difficult to make. Outside Paris great difficulty is experienced by all who do not come under military sponsorship. In many French towns all first-class hotels have been

requisitioned by Allied or French military authorities and others are terribly over-crowded.

An official mission of Government-sponsored representatives of United States and United Kingdom business concerns was unable to obtain through either embassy a car for their extensive mission through France. Neither could the embassies assure them of gasoline, food or lodging in the cities they were to visit. A car was finally furnished by the British Ministry of Supply, and French authorities supplied gasoline coupons for which the travelers paid at the rate of $1 per gallon. Food and lodging were arranged through local French authorities in accordance with the travel orders given by French authorities in Paris.

Fish Liver Business

WITHIN ten years the total take of fish livers in British Columbia increased 23½ times, from 280,000 pounds in 1933 landed, to 6,600,000 pounds in 1943. Canada's eastern fisheries have experienced similar expansion, although British Columbia is the most important Canadian fishery from standpoint of value. Fishermen used to toss livers overboard as worthless, but now a captain and his crew can make $20,000 gross from the livers alone of one exceptionally large catch of fish. This business naturally has come to Canada as the result of the war which shut off Norway and other European soucres of vitamin fish oils. Certainly when the war is over and normal trade is resumed there will be an enormous production of these oils and it remains to be seen how much of this new business is to be held against old sources. Certainly those fishing areas where livers were formerly thrown away have become conscious of the fact that these livers have real value. They will continue to collect then so long as they can get any reasonable amount of money for them. Perhaps the determining factor in a continuance of these newer sources of vitamin fish oils will depend largely on the potency of the oils from various types of livers, since most of the products in use now are concentrates and the value of the various livers is determined solely by the potency of the oils.

Alcohol from Cuba Forbidden

USE of imported cane alcohol for further processing in this country was prohibited May 7 under Limitation Order L-348 issued April 28. This means that perfume and cosmetic manufacturers cannot import alcohol into this country and use it in their products. The order resulted from the large diversion of this alcohol into blending of whiskeys with cane alcohol imported from Cuba, and it means that not only will the perfume and cosmetic manufacturers be restricted in the use of this material but also blenders of whiskeys will face another shortage of supplies. It was explained when the order was issued that the volume of beverage-blending spirits imported from Cuba in recent months has increased sharply, and the order was drafted to avoid a diversion from industrial stockpiles comparable to that which occurred in 1943 and 1944.

If perfume manufacturers in this country want to make use of the alcohol available in Cuba, it would be necessary for them to ship their perfume concentrates to Cuba and have them blended with alcohol there, and then have the finished product imported into this country.

Fishbein Tells "The Hat"

WE GOT a big kick out of Morris Fishbein telling Mayor LaGuardia that his report on marihuana was cock-eyed. One thing about Fishbein is that when he goes after somebody he generally waits until they step into his own backyard and then he gives it to them right. Even though LaGuardia's report on the subject was the result of investigations conducted by physicians for New York City, Fishbein let go at it with both barrels. We do not know definitely why Fishbein wanted to let "The Hat" have it, but after all the Mayor has been quite busy in the field of socialized medicine for the great City of New York.

No Ingredient Change Says FTC

THE Federal Trade Commission is sticking its neck out again and this latest instance should give added impetus to this and other industries to get behind the bill introduced in Congress to assure manufacturers of proper court review of the Commission's decisions. This latest instance is a complaint issued against the Pompeian Olive Oil Company of Baltimore, whom the FTC accuses of misrepresentation because, during the period in which imported olive simply was not to be had, the company used domestic oil. Even though the company dropped the word "imported" from the labels, and made no attempt at deception while struggling to keep its brand name alive during the stringencies of wartime conditions, the Commission says the customers were deceived. If the FTC can get away with this one, it can knock over each and every manufacturer who has made any substantial changes in the ingredients of his products because of war shortages but has continued to use the same brand name and substantially the same label.

Alcohol from Wood

ALCOHOL production from wood is expected to become an accomplished fact during June when the plant of the American Wood Sugar Company at Williamette Valley, Oregon, is expected to come into production at an annual rate of 2,500,000 gallons. This project has been referred to many times before, and the company is headed by P. L. Frailey, long known in the drug business. The production director is Erwin Schaefer.

There never has been any question that sugar could be extracted from wood and fermented into alcohol. However, in this country the project was a simple one of economics—the cost was higher than the cost of producing alcohol from molasses or grain. However, under war conditions alcohol requirements rose to such heights that molasses supplies were insufficient and it was necessary to draw heavily upon our supplies of grain. Grain is necessary for food for humans and livestock, while wood waste has no use at all. Therefore, costs are being ignored to turn to the war effort an otherwise useless material. After the war the story will most likely be different.

Basing-Point Practices

MILD excitement followed the recent decision of the U. S. Supreme Court upholding the Federal Trade Commission in its actions in the Corn Products Refining and A. E. Staley Manufacturing Company cases. The companies are manufacturers of glucose, and in the case of Corn Products Refining, the glucose is produced at its plant in the Chicago switching district as well as at its plant in Kansas City, Mo. However, the company sold all its output from both plants with freight rates based on Chicago. This meant that some consumers who received goods from the Kansas City plant were charged for freight from Chicago to Kansas City even though the material did not travel this distance, while in other instances the company absorbed this freight charge.

But the fact that the Supreme Court upheld the FTC in declaring this practice illegal, threw a scare into all manufacturers who employ basing-point practices. However, the fact of the matter is that other basing-point practices will have to be tried on their own merits. It does not necessarily follow that the court would declare illegal the practice of having basing-points at all points of production throughout the country. But manufacturers had best study their basing-point practices to see if they include any such instances as were ruled illegal by these decisions. Also they had better study them to determine if they include any other instances that might be considered discriminatory. It is well known that in some instances basing-points have been established at places where no production or warehousing of a competitor is located, such basing-points being made by one producer to satisfy a large buyer and other manufacturers following the practice to meet competition.

Injection Product Standards

THE great increase in the use of injection products brought on by the war has caused increased interest in the proper control of these products when packaged in ampules. Dr. Theodore G. Klumpp, president of Winthrop Chemical Company, recently reported to the Combined Contact Committee of the American Drug Manufacturers Association and the American Pharmaceutical Manufacturers Association the results of a survey which he conducted among manufacturers regarding the U.S.P. standards for ampules. The replies of forty manufacturers showed that, on the average, 15 to 20 per cent of all parental solutions are rejected by the manufacturers themselves because they fail to comply with the standards for undissolved material. Rejections run as low as one-half of one per cent reported by one small concern, to 50 per cent in another plant.

The report states that the survey confirms the experience of procurement official of the Armed Forces "who have stated that they have been unable to obtain satisfactory deliveries of ampule solutions because of the operation and enforcement of the standards." The report points out that while the U.S.P. is supposed to be the standard-making agency, manufacturers have gone to the Food and Drug Administration to have them set a real standard. "In other words," says the report, "here is a case in which the FDA has taken up where the U. S. P. and N. F. have left off and provided standards in an effort to be helpful. If there can be said to be a standard it is certainly the FDA standard and not the U.S.P. or the N.F. provision."

As a means of producing and supplying to the medical profession ampuled products that are proper for use, the executive committee of the American Drug Manufacturers Association has approved a $20,000 contract with the Victor Division of the Radio Corporation of America for research leading toward the development of an electronic machine for inspection of ampules containing parental solutions. A.D.M.A. President A. W. Lescohier, who is also president of Parke, Davis & Co., A.D.M.A. Executive vice-president Carson P. Frailey, and Contact Committee Chairman F. O. Taylor have been named a committee to keep in touch with RCA engineers as to the steps in the development of the apparatus. RCA engineers hope to adapt a machine now used for detecting foreign particles in bottles of carbonated beverages to the purpose of detecting foreign particles in ampules. Voluntary contributions to defray the cost of the research have been made by several firms. No restrictions will be placed by the A.D.M.A. on the use of the machine, and there will be no royalty payments to the A.D.M.A. RCA retains the right to any patents granted in connection with the device.

Sulfa Drug Research

THE sulfa drug field is ten years old since it was in 1935 that the remarkable curative powers of Prontosil were reported, in Germany, while late in the same year French workers demonstrated that the active part of Prontosil was sulfanilamide. Since that time, according to E. H. Northley of Calco Chemical, 5,485 compounds related to sulfanilamide have been published. Also, says this scientist, the possibility that more active sulfa drugs than those at present known will be synthesized becomes increasingly remote in view of the thorough combing of the field that has taken place to date.

Borden Enters Pharmaceuticals

AND now the Borden Company is entering the pharmaceutical industry through the purchase of the pharmaceutical division of W. F. Straub & Company. Borden has merely purhcased this one part of the Straub business, and W. F. Straub & Company will continue to market its food products —notably prune juice and honey—and its detergent specialties.

Borden will operate the business—which is twenty-five years old—as the Straub Laboratories division of the Borden Company. William H. Berg, formerly of White Laboratories and more recently of Winthrop Chemical Company, joined Borden some time ago to head up the company's pharmaceutical division whach at that time was practically non-existant. The acquisition of the Straub business was the natural consequence of this development.

Borden has bought a going business with excellent synthetic chemicals, hormones, and endocrines. The company has long been a seller in bulk to other pharmaceutical companies, as well as selling these products under a private brand set-up,

and also under their own name. The business under their own name was small and this is the business that Borden intends to build up at the same time keeping the other phases of the business. In addition there is veterinary business which Borden will seek to develop further. The company had an excellent scientific staff which has been taken over by Borden. This acquisition gives Borden an excellent nucleus upon which to develop a real pharmaceutical division and this is what they intend to do.

Benzyl Esters Tighten

NOW benzyl benzoate is under heavy order by the Government for use in insecticides used in military operations. Since benzyl benzoate is made from benzyl chloride as are most of the other benzyl esters, there will be a real shortage of practically all of these products.

Penicillin Restrictions

THE influence of the medical profession over the sale of drugs is clearly indicated in the action being taken in various places to restrict the sale of penicillin and its various preparations which will come along soon, to prescriptions of physicians. Penicillin is said to be the only drug known of which an overdose is harmless, yet one State puts it on the poison list and others cease unnecessarily to restrict its use. Power is something that if used to too great extent is eventually taken away from the one possessing it.

Penicillin Price Down Again

PENICILLIN prices broke again late last month when the price to the retailer went from the previous price of $1.54 to $1.20 per vial of 100,000 units with 20 per cent off this price for the wholesaler, thus making the amount that shippers of the product received for a very large part of the drug 96 cents per vial. A price of 90 cents per vial was available for Federal and State institutions but not for municipal and county institutions. Prices to the Armed Forces by leading manufacturers dropped to 60 cents per vial.

The drug seemed to be moving well through the regular drug channels, but the steadily mounting production has caused no apparent stringency in civilian supplies and competition among pharmaceutical manufacturers is exceedingly keen. It must be realized that many doctors know practically nothing about penicillin as is evidenced by the following story told by one of the manufacturers of the drug. It seems that a doctor called this manufacturer and the call was routed to the medical director of the company. The medical director was not in the office at the time so his secretary took the call. The girl was told that the doctor had a vial of the company's penicillin which he couldn't use because it was all dried up and he insisted that a new one be sent to him immediately as he had a serious case on his hands calling for penicillin. When the medical director returned he called the doctor who immediately apologized for bawling out the girl explaining that, at the time of the first call, he had no idea that penicillin was shipped dry since he had only seen it used in hospitals when it was being injected.

What's a White Market?

EVER since England declared war upon Germany we have been hearing the expression "black market" and this expression has been widely used in this country as well as in Europe. But just recently we hard for the first time the expression "white market" in connection with prices of Brazilian menthol. When we inquired what a white market price was we were told that it was a price below a floor price established by a government. It seems that the Brazilian Government has established a floor price of $19.50 per kilo for menthol and that exports below this price are not allowed although some are apparently being made. Therefore, since a price above a ceiling price is a "black market" price, so a price below a floor price is a "white market" price.

Pharmacopoeia-Headquarters

IN PLANNING for the future, the last pharmacopoeial convention authorized maintenance of a headquarters, and at that convention, which was held in 1940, Washington was believed to be the most desirable place. However, since that time our entrance into the war makes this impracticable. Therefore, a building to be used as temporary headquarters has been purchased at 4738 Kingsessing Ave., Philadelphia, which is a few blocks away from the Philadelphia College of Pharmacy and Science where Chairman of Revision E. Fullerton Cook has his office and where some other members of the U. S. P. staff have affiliations. The building is a two-story apartment which will be renovated for Pharmacopoeial purposes, providing adequate storage space and fireproof facilities for protection of invaluable records. The foundations will now be laid for a permanent headquarters in Washington or some other city when the time comes for such action. ▮

What in Post-War?

THE war period has added to practically every industry a considerable number of producers who were never heard of before. And in this respect this industry is certainly no exception. In addition, manufacturers who were in existence in this industry at the opening of the war have expanded to a marked extent. When the war draws to a close and contraction of government orders, as well as contraction of the national income begins to shrink, we wonder who is going to feel the pinch to the greatest extent. Undoubtedly some of the newer companies in the industry are going to remain in it to the detriment of some of the older companies in the field. Also it seems obvious that some of the newer companies will fold when the going gets tough. But how many of the older companies that have expanded greatly during the war boom are going to be able to maintain any substantial amount of their increased business? For after all, the amount of business done by this industry pretty closely follows the curve of disposable income with slight inverse variations for the state of health of the nation. But whatever way you look at it, this industry is going to have its problems of competition when the war is over just the same as any other industry. Those who make the products for maintenance of health and beauty of the people of the country are no marked exception from the basic laws of economics.

The Drug Industry's

Changing Products and Changing Distribution Call for Research in Manufacture and Sales

UNDER the impetus of war, drug manufacturing has been accelerated to the most rapid rate of activity in its history. And the high rate of speed at which the industry is moving not only applies to the greatly increased production of goods, but also to the discovery, production, and distribution of new therapeutic agents. Naturally enough, this increased activity in the development of new therapeutic agents multiplies the production problems which are already greatly intensified by the abnormally high demand for the normal products of manufacturers. One outstanding reason why the newer products are multiplying production problems is that many of these products are made by completely different methods than are employed in the production of the older products. Atabrine, for instance, which many companies have had to manufacture for the government, is a complicated organic chemical process which requires real know-how to produce. Penicillin resulted in a production problem that took the best minds in the business a long time to lick. In the case of penicillin entire new plants with great quantities of newly designed and complicated equipment were necessary before any sizable output could be obtained.

In the present era, with increased hospitalization of civilian patients and large-scale hospitalization of members of the Armed Forces, there has been an extraordinary increase in the amount of parenteral, or injection medication. Also penicillin, which is so widely used now, has up to the present time been administered almost completely in this way. This increase in parenteral preparations has meant a tremendous increase in the packaging of solutions in ampules with all of its attending problems. And within recent years, the manufacturers of injection solutions have been plagued with the new demand that these preparations be entirely free of pyrogens and any floating particles which are said to produce fever or other untoward conditions when injected into patients. This elimination of all particles from ampuled solutions is reported to cause on the average of 15 to 20 per cent rejections within the plants of the producers. In some instances these rejections run extremely high, one manufacturer blandly stating that his company is only able to ship 30 per cent of the ampuled products which they produce, the other 70 per cent being rejected by their own inspection. In many plants, 25 per cent rejections is considered normal, anything below this being considered good, and anything above it calling for attention.

But the rapidity with which new products have been developed and come into widespread use has caused manufacturers many headaches. Before the sulfa drugs were introduced, pharmaceutical companies were producing in large volume many biologicals which were later replaced by the sulfa drugs. After intense research on the sulfa drugs and development of many new improved forms, penicillin arrived on the scene. None of these products has completely replaced its predecessor as they all have their uses and doctors are well known to have their preferences. However, it meant that production schedules had to be constantly adjusted as usage of the various products changed rather sharply, and it meant that all types of these products had to be carried in stock by the manufacturer, and that he had to readjust the stocking of wholesalers and retailers according to variations in demand. And this state of affairs is not expected to improve, but rather to become worse as the acceleration in research produces increasing numbers of still newer types of medicaments.

But now with the war in Europe at an end, manufacturers are trying to solve as many of these problems as they can so that they will be in a favorable competitive condition when they try to sell the outputs of their greatly increased production facilities. For after all, the tremendous production of medicinal agents not only for the heightened wartime demands of the Armed Forces, but also for our Allies and for the increased medical attention being bought by the population of this country due to the all-time high national income, has been at a level which is far above the normal requirements of this country. A glance at the increase in sales volume of those drug and pharmaceutical companies as publish these figures will give a clear indication of what manufacturers will be facing when hostilities finally cease.

However, forward-looking manufacturers have taken the opportunity which this period of record sales and

Post-War Program

large income before taxes has presented to put their plants in order for post-war competition. Facilities have not only been increased to meet wartime demand, but money has been spent lavishly for improved equipment and facilities which would enable goods to be produced as cheaply as possible. All of this was necessitated by the manpower shortage created by the war, and due to the fact that manufacturers had to turn out increased production for the Armed Forces and the government with decreased manpower, application of funds to improved facilities was quite proper.

But in addition to these increased problems of production resulting in large measure from the changing complexion of the products of the industry, manufacturers are expecting to be facing serious changes in the distribution set-up of the country. Mergers are now taking place among the chain store set-ups throughout the country, and more mergers of this type are rumored. Some oldtime wholesale druggists have been sold and there are rumors of a new chain of wholesale houses being put together. Leading chain store organizations are said to favor the large block-long stores for their post-war planning and it is understood that they will soon start closing up the smaller units and have fewer but much larger stores. Also these large chains are expected to increase their activities in setting up agencies in independent stores thus covering at least as much, and perhaps more territory than they did before with the large stores of the chain adding to their prestige.

In addition, some fifty-six per cent of the supermarkets in the food field are expected to introduce into their stores full stocks of drugs and cosmetics, while an additional thirteen per cent will handle perfumes and cosmetics but not the full line of drug products. The opening up of the five and ten cent stores as stores without price limit, which action occurred before the war, is expected to result in these stores being recognized, after the war when merchandise becomes free, as still greater markets for the products of this industry.

Manufacturers realize that in the highly competitive market which will exist after the war is over they will be facing demands by these various types of outlets as well as by the independent retail druggists to favor each of them at the expense of the others. The associations of the independent retail druggists can be expected again to be active in shouting the demands of their members and in condemning those manufacturers who do not accede to their demands. Wholesale druggists also can be expected to resume their criticism of manufacturers who do not place all their business through them or who do not give them the discounts which they say they must have. In other words we shall return to a similar state of affairs that existed before the war although the fight for business by manufacturers, wholesalers, and all types of retailers will, if anything, be much more.

Wholesalers naturally favor those manufacturers who move a large volume of goods through them, preferring above all other manufacturers those who have a policy of selling exclusively through wholesalers. As a matter of fact, a survey recently made by a large pharmaceutical manufacturer indicated that Eli Lilly & Company and Mead Johnson—both houses with a policy of selling exclusively through wholesalers—were numbers one and two in the volume of business done by wholesalers with manufacturers. Number three, according to this survey was International Cellucotton, makers of Kotex and Kleenex, who sell through many other types of distributing outlets other than wholesale druggists. Number four and number five places were given to Johnson & Johnson and E. R. Squibb & Sons in almost a dead heat.

Wholesale druggists as well as retailers must be able to obtain the lines of merchandise that are popular if they expect to have a real place in the competitive picture. Those who obtain the franchises of the lines which are restricted as to wholesale or retail distribution have an assured income that is denied to their competitors. Threats that this method of distribution would be attacked by the Federal Trade Commission under the Robinson-Patman Act were heard before the war, but thus far no action has been taken and manufacturers still retain the right to select those to whom they will sell their goods. Any deviation from this policy by FTC order backed by courts would entirely change the distribution problem as it exists in a large part of the industry.

As to the products which the industry anticipates will help them weather the post-war storm manufacturers look forward to increased activity in amino acids, penicillin and other products of this type whether made from molds or by synthesis, and products for the control of diseases which are not now controllable by the use of drugs—these latter products being expected to result from the large research programs of manufacturers. After all, manufacturers view the rapid strides made in therapeutics within the last ten or fifteen years merely as an indication of what can be anticipated in the future. They are of the opinion that the acceleration in research will continue to mean greater acceleration in development of still more efficacious products which will accomplish what now appears impossible of accomplishment in the treatment of human ills

BLACK STAR

Antibiotics Other Than Penicillin

By M. A. LESSER

"ANTIBIOTIC" is a new word in our vocabulary, but already it holds tremendous portent in disease control. Today, penicillin is by far the most valuable of these antibiotics, but there are many other anti-infective agents derived from bacteria, fungi and other micro-organisms which offer promise of having great therapeutic worth. Literally scores of antibiotics other than penicillin have been isolated and studied, but it is known that hundreds, perhaps thousands, of such agents await study and classification.

Even though only the surface of this new field has been scratched, it is realized that new potent weapons, far superior to most chemical agents, will be made available to fight disease-producing organisms.[1] It is well to remember, however, that although many of these substances of biological origin exhibit great antiseptic activity in the test tube or petri dish, only a comparative few retain this activity in the presence of animal tissue.[2] Then, too, despite the rapidly accumulating information concerning the production of antibiotic substances by micro-organisms, then isolation, and their utilization for combating disease, comparatively little is known of their mode of action against bacteria.[3] It is fully appreciated, however, that striking differences do exist in the specific or selective action of various antibiotics; some being more effective against gram-positive forms, some more active against gram negative types, while others affect both groups.[4] It should be explained that the tenus, "gram-negative" and "gram-positive," refer to a basic, standard bac-

teriological staining technic used for differentiating bacteria under the microscope.

Because there are many antibiotics, with the number increasing steadily, and because so many factors have to be taken into consideration in the absence of certain specific knowledge, e.g. chemical structure, certain standards or criteria have been developed to evaluate and classify these agents. According to Waksman,[5] a pioneer in the field, these criteria are: (a) the organism that produces the substance; (c) The toxicity of the substance and its chemotherapeutic activity; (d) the selective effect of the material on specific bacteria. (This is often designated as the bacteriostatic or antibiotic spectrum); (d) the chemical nature of the substance; and, (e) the mode of action of the substance upon bacteria.

In the past, it was found simple and convenient to classify an antibiotic according to the organism that produced it. Thus there are bacteria antibiotics, higher bacteria (antinomyces) antibiotics, fungi (Penicillia, Aspergilli) antibiotics, algae antibiotics, and higher plant antibiotics. With increasing knowledge of the subject, it was realized that there would be considerable overlapping since one organism may produce several different antibiotics, while several different organisms may produce the same kind of antibiotic.[1, 6] For example, about a dozen organisms produce penicillin, and conversely, it is now realized that the several antibiotics known as clavacin, patulin, clavatin and claviformia are an identical substance. With these facts in mind, this source-classification still offers a not-too-complicated method for considering the more important antibiotics.

On this basis, bacteria-derived antibiotics come in for first consideration. Among the most important of this group are gramicidin, tyrocidin and tyrothricin.[7] All three stem from the highly indicative work on soil bacteria done by Dubos[8] of the Rockefeller Institute for Medical Research and reported in 1939. In a sense, it might be said that the work of Dubos was the spark which ignited the interest in antibiotics and eventuated in the development of penicillin and other anti-infective agents of this type.

Gramicidin, the most powerful of the three antibiotics, was found effective against gram-positive organisms, but its toxic effects on red blood corpuscles limited its usefulness to local application and the irrigation of closed body cavities. Clinically, gramicidin has been used in the local treatment of a variety of conditions like ulcers, empyemas, persistent cystitis, sinusitis, conjunctivitis and other conditions associated with Gram-positive organisms.[7, 9] It has been used in various forms such as in isotonic glucose, an emulsion in water, or mixed with oil.

Russian workers have devoted considerable study to soil bacteria antibiotics and have obtained a type of gramicidin differing chemically from that described by Dubos; hence the name Soviet gramicidin or gramicidin S.[10, 11, 12] Used in aqueous or alcoholic solution and also in ointments based on castor oil, gramicidin S has been successfully used in the treatment of infected war wounds[13] and favorable results have also been obtained in suppurations of soft tissues, in skin grafting, empyema, peritonitis and skin infections.[14] Gramicidin S, like the American form, produces hemolysis and hence cannot be used intravenously or locally when bleeding granulations are present.[15]

Tyrocidin, though active against both gram-positive and gram-negative organisms, loses much of its effectiveness in the presence of tissues.[16] It also behaves like a general protoplasmic poison.[17] Hence, its use, as such, is quite restricted.

Tyrothricin, containing both gramicidin and tyrocidin, has attained an established place in modern therapeutics. Accepted by the Council on Pharmacy and Chemistry of the A.M.A.,[18] tyrothricin is probably the most widely used of the antibiotics, after penicillin. Ineffective when given orally and both ineffective and dangerous when given intravenously, tyrothricin has proved valuable on local application, but must come into actual contact with the pathogenic organisms to be effective. Many reports have appeared in the medical literature citing its effectiveness in the treatment of infected ulcers and wounds, abscesses, empyema, eye infections, mastoiditis, sinusitis and other infections due to certain species of staphylococci, streptococci, and similar organisms.[19, 20, 21, 22, 23, 24, 25]

Available commercially, tyrothricin is used in dilute isotonic solutions to be applied by instillation, irrigation or as a wet dressing. The solutions may be introduced into body cavities like the pleurel cavity, sinuses, mastoid and bladder.[1] One marked advantage of tyrothricin, cited by Crowe[26] in his report on treatment of otoloryngological conditions, is the fact that sensitive bacteria are killed within an hour by tyrothricin, whereas the action of penicillin is much slower. For this reason tyrothricin is preferable in an operation where it is important to reduce wound infection and its consequences to a minimum. If the infecting organism is sensitive to both tyrothricin and penicillin, the best results are obtained by using tyrocidin at the operation and employing penicillin to saturate the packs and for any post operative irrigation necessary.

Pyocyanose, another bacteria-derived antibiotic, is effective against both gram-negative and gram-positive organisms.[27] A real "old-timer," having been known for about fifty years,[1] pyocyanase is very toxic and there is considerable disagreement over its therapeutic value.[28] Experimental studies[29] have shown it to exert a definite effect upon tetanus antitoxin. Singularly enough, since 1930, a pyocyanase ointment has been available in Germany for local application on skin lesions resulting from anthrax.[1] Pyocyanin, derived from the same organism as pyocyanase, is bactericidal against gram-positive bacteria.[5, 27]

Actinomyces, the higher or mold-like bacteria, also produce a number of interesting and potentially valuable antibiotic substances. Of these; streptothricin is undoubtedly the most important. Already in the

(*Continued on page 660*)

DON'T BELIEVE IT!
There have been a lot of idle rumors going around lately about various manufacturers of vitamin products.
One of them is to the effect that we are going to quit the vitamin business.
Don't Believe It!
I can assure you that this one is strictly an idle rumor. We are in the vitamin business to stay. We believe in the merit of our various products, and all of them will receive even stronger advertising and merchandising support than in the past.
Anything you hear to the contrary doesn't mean a thing.
HARRY B. GOLDSMITH, President
THE GROVE LABORATORIES, INC.
St Louis, Missouri
GROVE'S DEFENDER MULTIPLE VITAMINS
GROVE'S A&D VITAMINS
GROVE'S B-COMPLEX VITAMINS
GROVE'S VITA-BABY

The Vitamin Business

UNDER the title of "The Vitamin Business—'Damnedest Racket Ever Perpetrated' or Boon to Mankind?", Fortune for May gives its analysis or exposé of the vitamin business in this country. "Roughly $200 million worth of capsules, tablets, syrups, elixirs, and other preparations—a third of all drug store sales—over the counters of drug, grocery, and department stores and through mail-order catalogues" were sold in 1944. To millers and bakers they sold about $12 million worth of B vitamins for enrichment of flour and bread. To margarine manufacturers $2 million worth of vitamin A; to fluid and evaporated-milk companies, $1,500,000 worth of vitamin D; to animal-feed suppliers, $20 million worth of vitamins A and D. Manufacturers of beer, sandwich spreads, jams, jellies, and candy put $100,000 worth of assorted vitamins into their products. About $5 million worth of vitamin tablets were shipped to servicemen in far-northern and tropical countries and for use in emergency field rations, in addition to vitamin preparations in other forms. At least another $13 million worth were bought for distribution abroad through lend-lease and Red Cross.

Against this pretty sales picture of 1944, Fortune says:

"In other ways besides sales the industry had a memorable year. It was called by Dr. Ernst P. Boas of the Columbia College of Physicians and Surgeons 'the damnedest racket ever perpetrated upon the public.' It was blasted by the American Medical Association for venality, ineffectiveness, and waste; unfavorably reported upon by Duke University Medical School investigators; involved with the Office of Price Administration on charges of price gouging. Some of its members were hauled up by the Department of Justice on antitrust charges; others were cracked down on by the Federal Trade Commission for false and misleading advertising. There was a barrage of derogatory comments by consumer surveys, medical journals, and the lay press in general.

"The news reader might well have wondered whether he was (a) a sucker, or (b) witness to a scurrilous attack on one of science's most important contributions to the welfare of the common man. At the end of 1944 the public's confusion was reflected in a sharp increase in brand 'switching'—customers abandoning old standbys to look for new. One major manufacturer withdrew from the market altogether; several others, watching their wares stack up on drug store shelves, were looking for the nearest exit. By the beginning of 1945—despite substantial war orders—over-all vitamin sales, for the first time in their meteoric history, showed signs of leveling off."

Other pertinent information culled from the "Fortune" article follows:

Four-fifths of vitamin D is made synthetically and is patent-controlled principally by the Wisconsin Alumni Research Foundation which licenses seventeen companies (including five evaporated-milk concerns) to make synthetic D under Steenbock patents. The foundation's royalties have totaled $10 million. Under two other patents, two more manufacturers produce D_3, but by far the most important development in this field is yet another patented synthetic—du Pont's D_3, which is more effective on poultry than other forms of D. D_2 is made under a Steenbock patent by irradiating 7-dehydrocholesterol. Output of D_3 is estimated to be not much over half that of other synthetic D, but the dollar value is said to be four times as great.

Vitamins C and B are the most popular of all, partly because U. S. citizens are stirred by accounts of their dramatic cures of pellagra, scurvy, and beriberi. But

(*Continued on page 668*)

MENTHOL

By HARRY G. KELBLY

Not since the emergence of Brazil as a primary source of natural menthol has there been so much discussion, and so much confusion, relative to this commodity. The factors which resulted in this situation are understandable when the rapid strides made by Brazil as a menthol producer are considered.

In prewar years, the United States imports of natural menthol amounted to about 400,000 to 500,000 pounds annually. This menthol originated in Japan and Japanese occupied China. It was, therefore, a great relief to consumers here when in 1942–43 Brazilian production, first started experimentally in 1936, rose to about 80 tons of peppermint oil, and in 1943–44 to approximately 350 tons.

A wide difference of opinion prevails regarding the probable production this year, and this can be traced directly to the lack of definite and reliable information from Brazil. Some estimates of production run as high as 2,000,000 pounds of peppermint oil, with a yield of from 500 to 600 tons of menthol crystals. While more conservative estimates are much below this figure, the idea of a tremendous crop is so prevalent that those taking a conservative opinion do not attempt to refute the maximum figures.

Since American consumers are well stocked, and there is reported to be from 10 to 15 tons of unsold spot menthol, it is only natural that buyers here should take a resentful attitude toward current high prices and be unwilling to place new business at present import levels. Their opinion is based on an average price range of Japanese menthol of from $2 to $3 a pound prior to the war, and they point out that although the cost of living in Brazil is somewhat higher than in Japan, the differential is not sufficiently great to warrant such a wide price range as now prevails between the prewar price of Japanese menthol and the present floor price in Brazil.

Brazil contends that labor is demanding high prices, but since there are reported to be about 200,000 Japanese in Brazil, most of them engaged in agriculture, with a large amount of cheap migratory labor, this contention is refuted here. Peppermint grows profusely in Brazil and requires comparatively little cultivation. It produces two cuttings a year, and possibly a third if conditions are particularly favorable. The cost of production is not materially higher than in the Orient, it is said, and high prices, resulting overproduction, and uncontrolled speculation are said to be mainly responsible for present conditions.

The policy of American buyers to "wait and see" has not been without its effect in Brazil. The Banco de Brazil is maintaining its floor price for export at $19.50 per kilo, f.o.b. Rio, but due to the absence of orders for export at this price, and the quantity of peppermint oil on the market unable to find buyers, prices have dropped sharply for the oil.

Some banks in the interior of Sao Paulo have been financing the oil for producers at about 80 per cent of the value when at its highest. They now insist upon settlement of such loans and, highly alarmed, the producers have applied to the Federal and State authorities for assistance. A representative of the Economic Coordinator was sent to Sao Paulo and several meetings have now taken place between this official, the Secretary of Agriculture of the State of Sao Paulo, and representatives of the producers of oil and the manufacturers of menthol.

According to information freely published in the Brazilian press, the representative of the Coordinator declared that to solve the depressing situation it would be necessary for producers and manufacturers to agree on a common front against the consuming market. Since the United States is not interested in buying at present prices, and since these high prices stimulated production of menthol needed by the United States, Brazil must now meet the common front of buyers of menthol determined to force prices down to a minimum, they contend.

The following measures are therefore being considered:

A. Fixing prices for peppermint oil and menthol.
B. Limitation of area planted to peppermint oil in accordance with declarations to be made by growers regarding their previous crops.
C. Stipulation of a time limit of about 10 days for growers to make such a declaration.
D. Prohibition of new factories for production of menthol. *(Continued on page 673)*

Cosmetic Emulsion Manufacture

By E. G. THOMSSEN, Ph.D., Consulting Chemist

IN THE manufacture of cosmetics, the prcoess of emulsification is important from several standpoints. Certain substances which possess beautifying effect in their unaltered state, like oils, would not be consumed in the present volume because they would not appeal to the eye unless emulsified. Fats and waxes are also emulsified because they may be applied more readily to the skin, hair or nails. The cleansing and penetrating power of products in emulsion form, is greatly increased in numerous cases. A more uniform layer of oil, fat or wax may be applied when these are emulsified.

Emulsions are valuable not only for cosmetics, but also in the pharmaceutical and many other fields, such as floor polishes, insecticidal sprays, cleaning compounds, waterproofing and lubrication.

The methods of producing emulsions and suspensions has been greatly improved in later years. As a result, their applications are on the constant increase. Prior to these improvements, the chemist found it difficult to produce stable, satisfactory emulsions with such emulsifiers as soaps, usually soft soaps or Castile soap, sulfonated oils, borax, vegetable gums or extracts like tragacanth, acacia, agar, Irish moss extract (carragheen), saponin, and proteins like gelatin or egg albumin. The introduction of many surface active agents possessing diversified molecular structure has opened the way to practically any desirable emulsion, non-separating in nature, that it may be desired to make. Apparatus to make emulsions has also been much improved and added to the facility of emulsion production.

An emulsion results when two dissimilar substances, otherwise immiscible, are intimately dispersed or mixed under properly controlled conditions. Water is generally one phase and oils, fats, waxes or high boiling water insoluble, liquid compounds comprise the other phase. In order to form an emulsion it is necessary to have the two phases in liquid form. Usually a third ingredient termed an emulsifying agent, an emulsifier, or more recently and more properly, surface active agent, is required. The purpose of this emulsifying agent is to lower the interfacial tension between the two liquid phases so that the finely divided globules of one liquid will remain suspended in the other. If water is the continuous phase, with the oil globules suspended therein, the emulsion is termed oil-in-water type. If the reverse is the case it is called water-in-oil type.

Both kinds of emulsions are used in the toiletry field, cold cream being an example of an oil-in-water emulsion and absorption base creams the water-in-oil type. While solid creams, like cold cream for example, are firm at room temperature it is necessary to make them in the liquid or molten state at elevated temperatures.

Many theories as to emulsification exist. Of these the one most generally accepted is that the surface active agent forms a film around the finely dispersed globules and thereby prevents coalescence with other globules. This film which is exceedingly thin, is formed by the phase having the higher surface tension and yields or bends at the interface of the two phases permitting this film to completely cover the other phase. A protection against coalescence results. The coalescence of dispersed particles by either mechanical or electrical action is thus afforded. Thickness of this film is not necessarily an indication of strength as this depends mainly upon the affinity existing between the film forming molecules.

A few comments regarding the usual components of cosmetic emulsions are in order. These consist of water, oils, fats and waxes as well as derivatives thereof and emulsifying agents.

The subject of water does not require extensive elaboration. It hardly need be said that ordinary tap water is too hard and too impure to make satisfactory emulsions. In certain cases Permutit softened water is satisfactory though either distilled or de-ionized water, at times called "synthetic distilled," are far more satisfactory. If large quantities of water are used the de-ionized water is cheaper than distilled. Laboratory units to make this water, down to 12 gallons per hour are available. Unless pure water is used in emulsions, discolorations and other defects may be encountered with shelf life. Water is the cheapest ingredient in emulsions so it is good judgment to use the purest water.

Oils, fats and waxes and derivatives therefrom comprise an essential portion of an emulsion.

Oils may be of two types, mineral type and glyceride type. Mineral oils consist of hydrocarbons derived from petroleum oil and the glyceride oils are mostly vegetable oils. Since fats like cocoa butter or stearin for example are merely glycerides containing a greater quantity of fatty acids of higher molecular weight than those in the vegetable oils, their chemical properties are essentially the same. Paraffine and petroleum

jellies also are merely higher holologues of mineral oil, so they also act in the same way chemically as the mineral oils do.

Waxes used in emulsions include beeswax, carnauba wax, candelilla wax, montan wax, ceresin, ozokerite, Japan wax, and spermaceti. Of these waxes, beeswax and spermaceti are of animal origin, carnauba, candelilla and Japan come from the vegetable kingdom, montan, a vegetable wax and ozokerite a mineral wax are both derived from lignite. Of these waxes beeswax, ceresin and spermaceti are the most important to toiletries.

In certain cases cetyl alcohol, an ingredient naturally present in spermaceti is preferred to spermaceti itself. It is obtained from the wax by saponification and separation of the cetyl alcohol or by special hydrogenation methods of stearine. Cetyl alcohol readily forms emulsions for creams that impart a velvety, desirable effect on the skin. It melts between 35° and 40° C. and usually is sold in powder form. It is more stable than spermaceti and does not yellow nor become rancid.

Lanolin, which consists mainly of free fatty acids, their esters and cholesterin and isocholesterin, is used extensively in making cosmetic emulsions. The absorbtion bases derived from lanolin and which readily form stable water-in-oil emulsions are derived from lanolin. These consist of oxycholesterins and are generally sold under coined names.

As the characteristics of these oils, fats, and waxes are well known no further description of these will be given.

Emulsifying agents may be classed as pigments, gums, proteins and surface active agents. The last include soaps and wetting or foaming agents.

Pigments which form emulsions include bentonite, colloidal kaolin, hydrated lime or magnesia and other clays. When dispersed with water, their colloidal properties permit the formation of emulsions in water. Their use in cosmetic manufacture is limited, though milk of magnesia creams have been marketed.

Gums and proteins used as emulsifying agents and emulsion forming aids, include gum tragacanth, Karaya gum, gum Arabic, agar agar, Irish moss, alginates, pectins, saponin, gelatin, casein, methyl cellulose and egg albumin. These substances when dispersed in water possess a high degree of superficial and internal viscosity. It has been presumed that this increase in viscosity makes possible the formation of and stabilizes the emulsions.

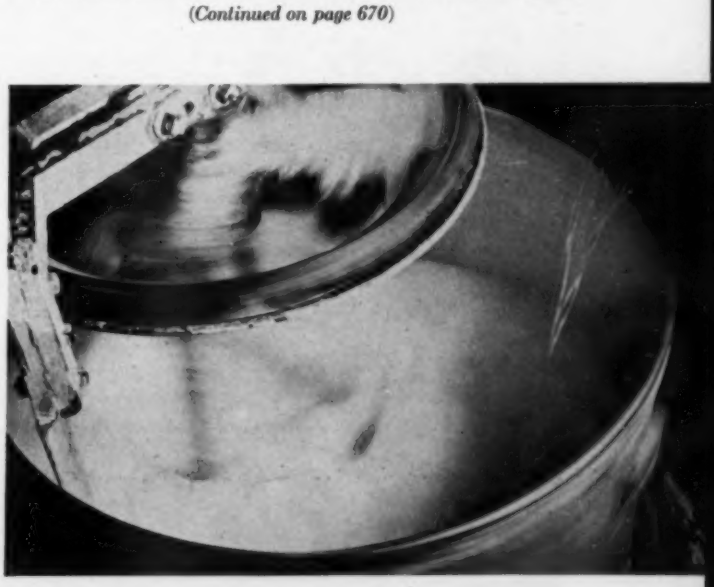
Lecithin is used frequently as an emulsifying agent. Up to 5% is employed. In appearance it is a brownish yellow, waxy mass. It was originally derived from egg yolk but is now made from soya bean meal. When derived from animal tissues, it contains phosphorous choline distearylglycerophosphate and betaine dioleoglycerophosphate from vegetable tissues. Its use increases wetting action, it is soluble in 10 parts of cold absolute alcohol, has a peculiar odor and swells when soaked in water or salt brine. It is sold in solution form, a lecithin solution consisting of 2% dissolved in glycerol and alcohol.

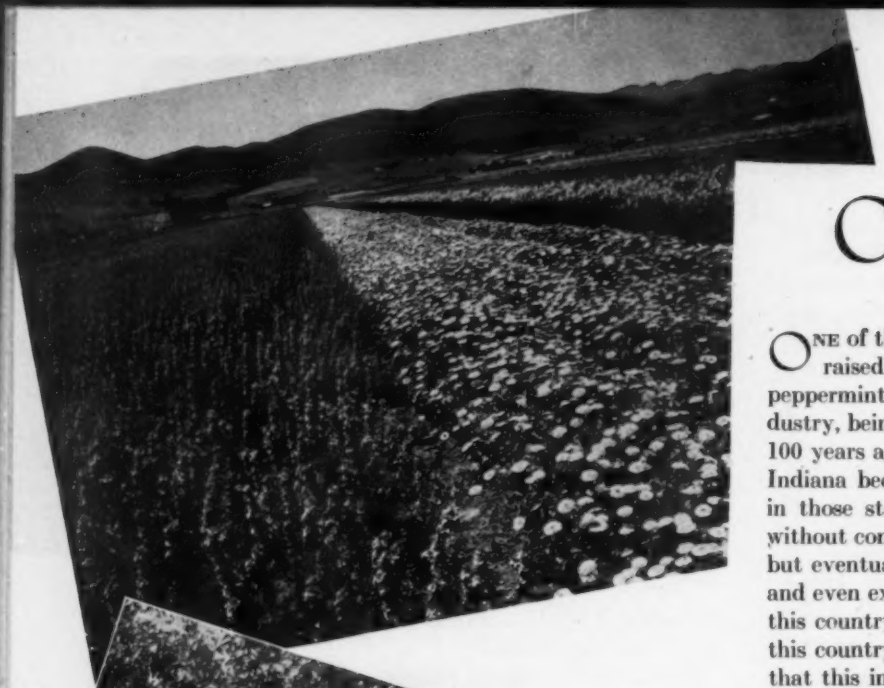
Surface active agents comprise the most important class of emulsifying agents. A large variety of these are available and through their use any type of emulsion may be formed. For convenience, we will discuss them as common soaps, triethanolamine, amino glycol, polyhydric alcohol esters and wetting agents.

Common soaps, especially soda and ammonia soaps are among the older emulsifying agents. While there are available soaps made from the unsaturated fatty acids like ammonium linoleate and ammonium oleate these are hardly suitable for cosmetic emulsions. It is customary, therefore, to use odorless, light cream to white soaps. Castile soap especially, has been most generally employed, though also some other potash and soda soaps are used. The well-known liquid honey and almond type cream for years depended largely upon Castile soap, in most formulae, as the main emulsifying agent. Other soaps, like ammonium or sodium laurate, toilet soap base and potassium palmitate and magarate are used for emulsions. Due to the difficulties in making stable emulsions with common soaps, their use has been greatly reduced.

Triethanolamine has been transformed from a lab-

(Continued on page 670)





Cultivation of

ONE of the crops that can apparently be successfully raised in California is peppermint. Of course, the peppermint industry has long been an American industry, being introduced into New York State well over 100 years ago, and later being moved to Michigan and Indiana because it could be raised more economically in those states. American peppermint was exported without competition to other countries for many years, but eventually Soviet Russia became a large producer and even exported our own type of peppermint oil into this country. But so far as peppermint production in this country is concerned, there are many who believe that this industry will move to the West Coast. The reasons behind this opinion have to do with the costs of producing in the two areas. In 1943, with advanced labor costs, a high cost producer in California was selling peppermint oil at $5.50 per pound and realizing a profit of $74 per acre on land worth $300 per acre with an additional investment in equipment of $50 per acre. This was a return of 21 per cent on his investment. Middle West operators claim that they cannot operate profitably at a price of $5.50 per pound.

The Pacific Coast has long been aware of the production of botanical drugs since the cascara sagrada tree grows in no other place in the world. British Columbia, Washington, Oregon, and California is its habitat and bark peelers in this territory produce about 6,000,000 pounds of bark annually, the bulk coming from Washington and Oregon. Careful peelers of the bark cut the trees off about a foot from the ground, with a slant, leaving the bark on the stump. The slanting stump is

The picture at the top of the page shows larkspur and calendula cultivation at Lompoc, California. Just below stramonium leaves are being trimmed from the stalks at San Bernardino. Immediately to the left is another stramonium field while below is a field of rose geranium at Fontana.

Drug Plants in California

to afford drainage from rainfall and to prevent water standing on the newly cut surface and starting decay. If the stump is left slanting, the root system promptly throws out a new set of shoots, which with the already well established root system, soon produces a growth large enough to be peeled again and yield another crop.

However, available supplies in Oregon are becoming farther and farther away each year, necessitating the packing out of much of the supplies by horses or mules from the remote places in the mountainous sections. However, it is thought that much good can be accomplished by the intelligent planting and cultivation of the cascara tree on waste lands of farms where the trees will thrive and produce a modest profit for the effort devoted to its production.

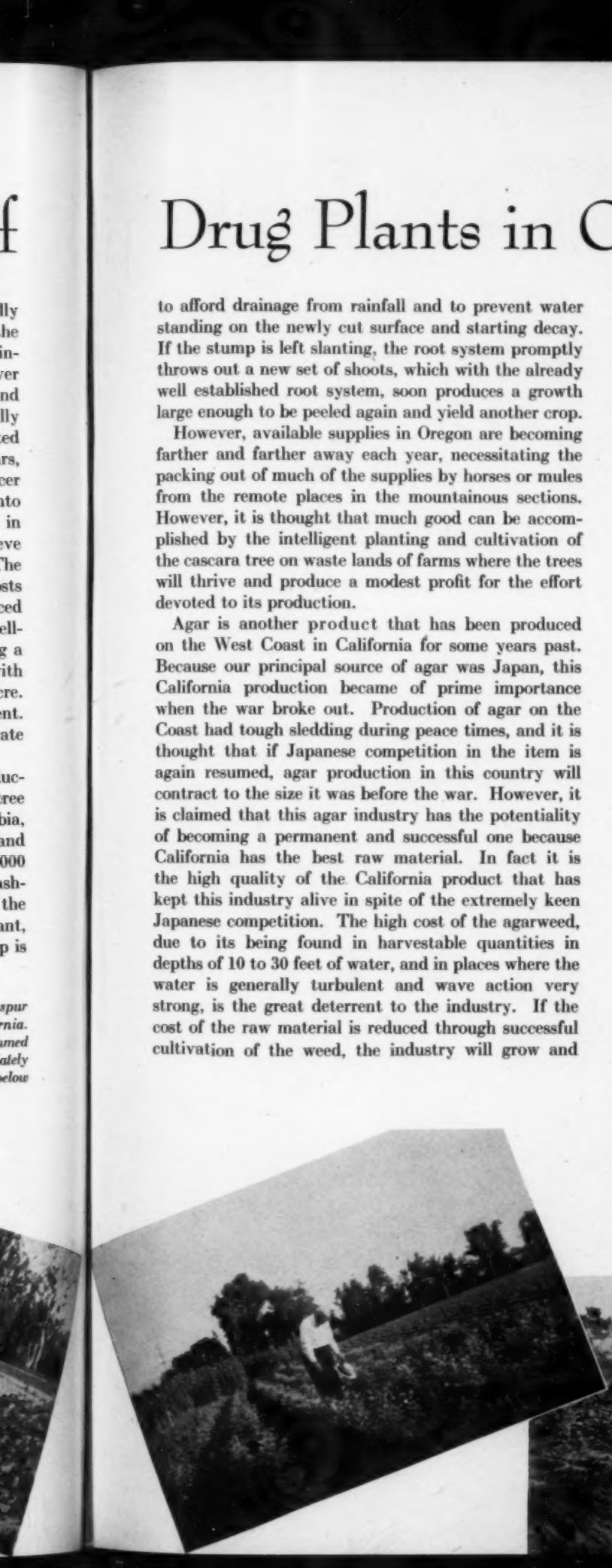
Agar is another product that has been produced on the West Coast in California for some years past. Because our principal source of agar was Japan, this California production became of prime importance when the war broke out. Production of agar on the Coast had tough sledding during peace times, and it is thought that if Japanese competition in the item is again resumed, agar production in this country will contract to the size it was before the war. However, it is claimed that this agar industry has the potentiality of becoming a permanent and successful one because California has the best raw material. In fact it is the high quality of the California product that has kept this industry alive in spite of the extremely keen Japanese competition. The high cost of the agarweed, due to its being found in harvestable quantities in depths of 10 to 30 feet of water, and in places where the water is generally turbulent and wave action very strong, is the great deterrent to the industry. If the cost of the raw material is reduced through successful cultivation of the weed, the industry will grow and prosper and we shall have a permanent agar industry in war or peace.

Licorice is still another example of what can be done in cultivation of important products on the West Coast. Licorice was imported from Asia Minor and Iraq to as high as 80,000,000 pounds a year. During the early nineties, the University of California furnished Spanish licorice seeds, brought from Asia Minor and the Tigris-Euphrates Valley, to growers in Kings County, California, where the plant grew and became a pest. When the present war came on, samples of this dried licorice root were sent to the largest importer of licorice in this country. Analysis of this and other wild native licorices indicates that they equal the best of the Spanish imported licorice. As a result, three carloads were dug, dried and shipped to eastern firms, and money was supplied by these firms to transplant into the Imperial Valley roots of the Spanish type for new development.

Cultivation of botanical drugs, spices and essential oil plants has received especial attention in the State of California because the forward-looking administration of that State has had the courage to foster investigation and experimentation in an attempt to find out if successful ventures could be developed there. According to Dr. E. N. Gathercoal, "California is especially well prepared in her diversity of soil and climates to fit each of these specialty crops into its own little niche where it can grow and prosper. California stands at the head for this kind of specialty agriculture." The body responsible for this development in California is the Division of Drug and Oil Plants of the State Department of Education.

What conditions will obtain after the war is of course the question that must be answered if these experiments are going to mean development of new industries for the State of California. Right now the administration in Washington is engaged in an effort to obtain from Congress the right to cut tariffs another 50 per

At the left Dr. E. N. Gathercoal, College of Pharmacy, University of Illinois, is shown inspecting senna plants at Brawley, California, while below licorice roots are shown on the surface of the ground after being thrown out by the plow. All photographs courtesy Drug and Oil Plant Project, California Polytechnic School.



Cultivation of Drug Plants in California

cent or a total of 75 per cent from the rates established in the Tariff Act of 1930 as they desire in order to work out agreements with other nations of the world. Naturally, any people who are interested in the growth of drug and essential oil plants in this country will want to know something about the resumption of foreign competition when normal world trade is resumed. But at the present time these answers are not forthcoming, and they will depend upon whether or not Congress gives the administration further control over tariff rates, what rates the administration will desire to cut to work out agreements, and whether or not the present administration or Congress in Washington is replaced by others which have a more nationalistic leaning. However, there is no reason why the experiments should not be carried on, since sufficient data must be at hand if attempts to gain protection for such a new industry are to be successful. Therefore, the study of these developments in California is well worth the while, since without them there would be no chance at all of ever building such a new industry.

Several firms in California are developing the growing of Jap mint, entering into five year contracts, thus giving a very sound foundation to those who are interested in growing this new crop for the production of natural menthol when the war is over.

Seeds for plantings of Egyptian senna have been brought to California. If these are commercially successful, long term contracts will be made with the growers thus opening the way for a permanent basis for crops formerly imported. Imports of this drug average somewhere in the neighborhood of 2,500,000 pounds, so that a fair sized industry could be established here if cultivation is successful.

Digitalis is one of the most important drugs in the doctor's arsenal. However, during the war period with imports cut off we have developed an industry in this country for our own supplies. California is interested in cultivation of digitalis for the reason that cheaper production might be possible in that state. Growing experiments are still being conducted to determine the best soil and climate conditions and which time is best for planting and collecting the leaves. Results seem to justify expectations that by proper selection and adequate growing conditions it should be possible to develop leaves which are at least as potent as leaves grown in Europe.

Cincus, or blessed thistle, has been introduced in California after being cultivated for quite a number of years at Chattanooga, Tenn. The reason for the move to California in the Imperial Valley as a winter crop was because of unfavorable growing conditions near Chattanooga, and particularly because of the difficulty in sun-drying the drug in that locality. It is hoped that the more uniform climate in the Imperial Valley, and its very favorable conditions will enable production of a uniform crop of high quality. Assay of the drug indicates a very high quality, from 200 to 500 per cent as compared with the imported article and the drug raised near Chattanooga.

About 10,000 to 15,000 pounds of larkspur seed was formerly imported from France for the drug industry in this country. When World War II came on there were no importations and prices advanced. Prior to the higher prices, seed growers in California filled some of the demand by supplying old surplus seed that could not be used for the flower seed business, and this trade was in reality a salvage proposition. However, with the advances in price it became profitable to grow for this business. Therefore, one seed grower in California has about 20 to 30 acres under cultivation just for this trade.

Condiment crops, the oils of which are also generally

(Continued on page 660)

Here are views of pyrethrum cultivation in Hanford and Fontana, California. The center picture shows pyrethrum in bloom while the other pictures show operators setting out the pyrethrum plants.

Choosing a Trade-Mark*

By JOHN H. GRAHAM

MILES of type have been set up to tell the story of trade-marks to the interested public but very few attempts have been made clearly to set forth the basic reasons for trade mark protection in simple, non-legal language and as briefly as is necessary if busy executives of manufacturing concerns are to read and absorb the information.

Any unbiased examination of the many trade-marks used today in the drug, cosmetic, and toilet goods industry will show that a good percentage fail to have any real harmony with the goods to which they are applied and lack the stimulating message which a good mark should possess. They fail to ring the bell in most instances because too little thought has been given to their conception and thus a valuable asset in sales appeal is lost.

It is realized that in this particular industry there is a large turnover of marks and some have a very short life being supplanted by the changes in styles and the constant quest for new shades and forms of the retailed goods. Even these short-term marks, however, are worth time and trouble to originate in a mood which will stimulate desire for the product and are worth registering at the Patent Office, since their short life can still be financially a gay one. Nor can one discount that occasional mark that should have died but still lives on, or the recurrent style cycle which may bring it back to prominence without volition of the manufacturer.

Therefore, *the first rule to be established is that nothing should be of greater importance to the product than its trade-mark.* Those repeat orders for the particular goods identified with the mark are partly the result of consumer habit and partly the result of the trade-mark appeal as long as the goods you are selling are satisfactory. Even if they are no better than those of your direct competitors, the trade-mark can be your most valuable asset and can lift your goods into the consumers' hands by its direct stimulus.

It is obvious, however, that all the time, effort, and expenditure you may put into the origination and promotion of the trade-mark will be completely wasted unless you make definite efforts to protect your own interests and do all you can to prevent others from using the mark.

This, therefore, creates *the second rule which is that you make sure you have a clear road ahead of you before adopting and backing a trade-mark.* The easiest way to do this is by registration of the trade-mark at the Patent Office since this serves many purposes.

After the initial steps have been gone through, as mentioned in my previous articles, and it appears from the results of the search made that the mark you wish to adopt is clear of prior marks, application is made for registration and thereafter, if the official Trade Mark Examiner is satisfied that your mark is clear of prior registrations, your mark is published in the Official Gazette. Since this Gazette is perused by interested parties throughout the country, it is very rare that any one using an alleged prior mark similar to yours but of which you are unaware, will fail to record that fact by opposing. Should you be defeated ultimately on opposition, you have saved yourselves a lot of financial and legal trouble and like headaches so often encountered when a mark is placed on the market with great backing but without benefit of search or of registration, and suddenly is confronted with an indisputable case of prior use.

Thus, registration confers protection both by its wide advertising and also by virtue of its being *prima facie* evidence of appropriation of the mark by the registered owner.

There are other advantages to the owner of a registered trade-mark, but those given above are the most important to the busy executive who is catching trade-marks in his stride through priorities, limitations, and restrictions.

The third rule is to put time, not money into its selection.

Looking through the trade-marks regularly published today, it would seem that the usual procedure involved in choosing a new trade-mark for a product to be launched on the market is about as follows. Some of the "boys" are around the conference table, each looking surreptitiously at his watch because he has a dozen other things to do besides attend this marketing meeting.

"Well, George," says the Boss, "that's a nice hand cream you just worked out. It's your baby so what do you think we should call it?"

"Well," answers George, "I thought of Walawahoo on account of my brother says the girls he saw there have the prettiest complexions he'd ever seen."

"O.K.," says the Boss. "Call in the advertising agency and tell them to go to town on it. It's good stuff, so spend all you want on promotion."

So, after much travail, the packaged cream is on the retailers' shelves; the public has been apprised of

(*Continued on page 666*)

*This is the third is a series of articles on trade-mark problems especially written for this magazine.

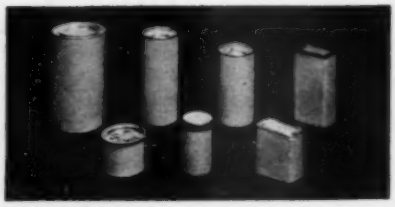
"The bigger the family—the better the service"

THERE's nothing like a big cooperative family for all-round service! With our facilities, experience and technical knowledge in handling all kinds of orders, we can give you a quick impartial analysis of *your* packaging problem. Result? The *right* package for your product.

Continental *is* a big family offering a wide variety of packages—metal containers, liquid-tight paper containers and cups, fibre cans and drums, steel pails and various heavy duty containers.

We're meeting the needs of America's armed forces now. But keep your eye on Continental! And on Continental's trademark, too! The Triple-C stands for *one* company with *one* policy—to give you only the best in quality and service.

Tune in: "REPORT TO THE NATION" *every Saturday over coast-to-coast CBS network*



Continental Fibre Cans—These composite cans (with fibre bodies and metal ends) meet a definite packaging need. They bridge the gap between all-metal cans and paper containers, folded boxes or bags. They're made for easy conveyor and filler handling, in a wide range of shapes, sizes, and diameters, with a great variety of metal dispensing closures—"naturals" for safe shipping of drugs, cosmetics and chemicals.

CONTINENTAL C PAPER DIVISION

CAN COMPANY, INC.

FIBRE DRUMS The Container Co., Van Wert, Ohio

LIQUID-TIGHT FOOD CONTAINERS — Boothby Fibre Can Co. Roxbury, Mass.

PAPER CUPS AND FOOD CONTAINERS — Mono Containers Newark, N. J.

COMBINATION PAPER AND METAL CONTAINERS

Headquarters: 330 W. 42d St., New York 18, N. Y.

13 Plants—Sales offices in all principal cities

Packaging and Selling

Cosmetics in Chain Stores

The growth of cosmetic sales during the past few years is no news to anybody. Interesting and perhaps debatable is what group of retailers has benefited most percentagewise. Everybody is doing more business, but which group is bettering its competitive position during these days of mounting sales?

In any discussion of this question, the chain drug stores usually come off pretty well. It is quite generally agreed that, as a group, they have had the heaviest increases during the past few years. The chief question which remains is whether they will hold this advantage or whether, when more normal times return, they will drop back into their former slot, losing business to both the department store and the syndicate store.

Although all of the chain drug stores do a business in cosmetics there are some among them which definitely rate high among cosmetic merchandisers. These chains have cosmetic savvy and know how important promotion and atmosphere are to successful cosmetic retailing. These are chains like Whelan which, sparked by vice-president and general merchandise manager Frank M. Head, showed an increase of 41 per cent in 1943 cosmetic sales, and a further increase of 22 per cent in 1944. This compares with an industry-wide sales increase of 20 per cent in 1943 and 13.8 per cent in 1944, according to Drug and Cosmetic Industry figures.

WHELAN DRUG STORES . . . Proudly Announce
A Sensational, New Achievement in
Authoritative Advice on Beauty Care
. . . The Cosmetic Salesgirl
. . . The Beauty Consultant
NOW . . .
MISS CATHARINE MOORE
51 OF WHELAN'S COSMETICIANS WERE THE FIRST TO RECEIVE BEAUTY CONSULTANT CERTIFICATES FROM
The Cosmetic School of Beauty Fashion
Whelan's

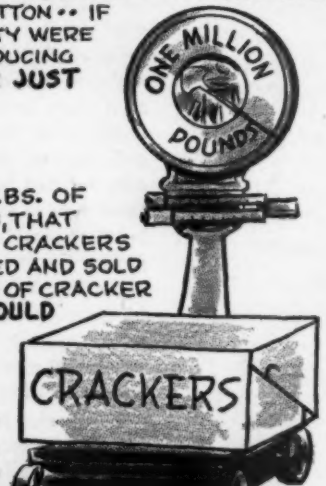
Obviously, Whelan's 41 per cent increase in cosmetic business during 1943 was due in large part to actual physical expansion of the cosmetic departments. Stripped of sundries, etc., all of the chain stores, including Whelan, went all out for cosmetics, enlarging space, redesigning stores, increasing personnel, and stimulating closer relationships with cosmetic manufacturers. In this connection, Whelan has the reputation of never permitting a promotion to lay an egg. They set the thing up so as to tie in local advertising and promotion with whatever the manufacturer is doing on that day or during that week. A careful schedule is worked out with each store manager and the cosmetic salesgirls so that all sales effort is coordinated on that date. This has not only resulted in increased sales but, in these days of scarce merchandise or delayed shipments, in Whelan getting the goods. For the manufacturer feels duty bound to get the stuff there on time and in quantity agreed upon, for Whelan makes certain that the manufacturer knows just what effort Whelan is putting behind his promotion.

Latest step in this program to build soundly in order to maintain volume and competitive position in the post-war era, is Whelan's subscribing to The Cosmetic School of Beauty Fashion for all of its cosmetic salesgirls. This is a course prepared by Beauty Fashion and designed to raise the standards and improve the effectiveness of over-the-counter cosmetic selling. Whelan not only recognized the need for trained cosmetic selling by subscribing to this course, but also dramatized what they were doing for the benefit of the consumer. Full pages were used in two New York newspapers to emphasize the training Whelan girls had received and to point out to the consumer how she would benefit by this training. The

Incredible— but True!

DRAMATIC ILLUSTRATIONS OF EMPIRE'S PRODUCTIVE CAPACITY

EVERY DRUG STORE IN THE U.S.A. COULD BE SUPPLIED WITH **186** HALF-OUNCE **PACKAGES** OF ABSORBENT COTTON •• IF EMPIRE'S CAPACITY WERE DEVOTED TO PRODUCING THAT CARTON FOR **JUST ONE DAY!**



1,000,000 LBS. OF CRACKERS! YES, THAT VAST AMOUNT OF CRACKERS **COULD** BE PACKED AND SOLD IN THE MILLIONS OF CRACKER BOXES EMPIRE **COULD** MAKE IN **JUST ONE DAY!**

1390 STACKS OF PANCAKES•• EACH AS HIGH AS THE EMPIRE STATE BUILDING•• COULD BE MADE FROM THE **3,742,000** LBS. OF PANCAKE FLOUR THAT COULD BE PACKED IN THE HUGE QUANTITY OF CARTONS EMPIRE COULD PRODUCE IN **JUST ONE DAY!**

A FLEET OF **127** TEN-TON TRUCKS WOULD BE REQUIRED TO DELIVER TO MARKET ALL THE COUGH DROPS THAT **COULD** BE PACKED IN THE VAST NUMBER OF CARTONS WHICH REPRESENT **JUST ONE DAY'S** CAPACITY AT **EMPIRE!**

Empire BOX CORPORATION

PLANTS: GARFIELD, N. J. • SOUTH BEND, IND. • STROUDSBURG, PA.

OFFICES: NEW YORK • CHICAGO • PHILADELPHIA • BOSTON • GARFIELD, N. J.

copy was headed "Whelan drug stores proudly announce a sensational, new achievement in authoritative advice on beauty care" and went on to say that "Now, Whelan cosmeticians are full-fledged beauty consultants. They are certified by the Cosmetic School of Beauty Fashion. Admission to this school is restricted to women experienced in selling cosmetics. All accepted students are given a thorough and rigid training on how to advise you properly in the use of cosmetics. High marks in final examinations are required in order to qualify for a certificate. Whelan customers are, therefore, now assured of receiving expert advice from trained-qualified beauty consultants on their individual beauty problems. Score another "First" for Whelan's!"

Tying in with the advertising were full page reprints on each Whelan window, flowers on the counters in each Whelan cosmetic department, the girls prepared to make their best appearance and impression and the certificate of The Cosmetic School of Beauty Fashion on the counter by the side of each properly qualified girl.

Similar promotion of its trained salesgirls is planned by Whelan for other sections of the country. Meanwhile other, as yet unannounced plans are currently being formulated for maintaining and increasing the Whelan position in cosmetic distribution.

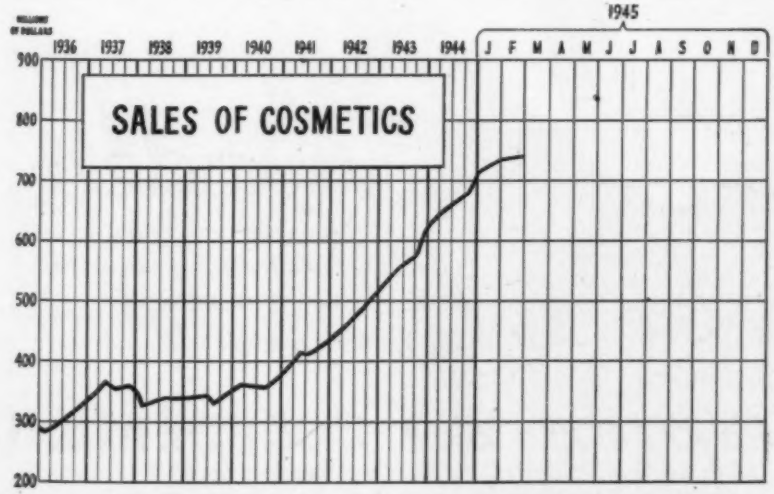
Container Production

Production of tin containers, which has generally been assumed to be less than in pre-war years, has on the contrary shown a slight increase from 16.7 billion units in 1939 to 17.4 billion units in 1944. Reason for the general impression that production is off is the fact that of this total only 8.4 billion units found their way into civilian channels in 1944.

On the other hand, glass container production has been increased from 7.0 billion units in 1939 to 14.4 billion units in 1944, of which 12.9 billion units went into civilian channels.

Fragrant Diplomacy

"The Chemist and Druggist" of England publishes a note under the above title in its March 10 issue. This says that "A columnist in the 'Manchester Guardian' comments on Mr. Churchill's gift, while at Cairo recently, of amber, musk and jasmine to the King of Saudi Arabia. 'Even an old resident may at times want an antidote,' he quotes from a correspondent, 'to the smell of camels and goats in a hot place like Riyadh.' King Ibn Saud is described as a notorious devotee of perfumery. It is even understood that he employs a special buyer or 'taster' to maintain supplies at a suitable level of quality and quantity, and that he 'consumes' in his Court something like a crate a month of eau de Cologne, lavender water, and French perfumes. For this information, obviously, we cannot vouch, though the fact that two other near-Eastern territories, Syria and the Lebanon—both Arab countries—are looked upon as French spheres of influence, despite their 'independent' status, suggests the possibility of a firm economic basis for future co-operation between the two peoples. The fragrant diplomacy Mr. Churchill has recently engaged in may be recommended—not too seriously—to the Department of Overseas Trade and leading British perfumery manufacturers as a means of expanding this country's post-war export trade. It is not to be overlooked, moreover, that the prospects of reconciliation between two sections of the industry in this country might be improved by an exchange of each other's creations."



Retail sales of cosmetics for the twelve months ended with February 1945 totaled $740,085,000. This compares with $730,636,000 for the twelve-month period ended with January 1945, and with $635,092,000 for the twelve months ended with February 1944.

1927-1945

Fortunate indeed is the company which can use its advertising manager in its advertising, but Dorothy Gray is one such. As part of a Saks Fifth Ave.

series on Dorothy Gray's Cellogen Cream, showing sketches of various anonymous smart women as they look today and as they looked in the late 1920's Elinor Guthrie McVickar appeared as the second in this series. The sketch is shown nearby and the copy which went with it said "Your jewelry has changed . . . is your skin unchanged? Even though you're over thirty, you can help your skin look younger! Of course no skin really remains the same, but you can have a smoother, more radiant look with Cellogen Cream. This expertly compounded night cream contains an active hormone ingredient, which, if faithfully used, your skin can absorb!"

Grocery Outlets

The National Association of Retail Grocers and the Curtis Publishing Co. in a survey conducted among independent retail grocers found that odd items, including drugs and toilet goods accounted for only 11 per cent of the business. Still 60 per cent of them carry shaving cream and tooth paste, 41 per cent hand lotions, face creams and powder, 42 per cent proprietary remedies, and 41 per cent vitamins.

LOOKING INTO THE FUTURE

When you think of bottles think of

Swindell

Machine made and hand made glass containers for cosmetics, drugs and beverages.

SWINDELL BROTHERS, Inc. BALTIMORE, MARYLAND

200 FIFTH AVENUE, NEW YORK ROBERTO ORTIZ—HAVANA, CUBA

The Cosmetic Trend

A quick check-up with buyers and buying offices indicates a rapid drop in inventories of lipsticks, hair preparations, shampoos, deodorants and antiperspirants, following the spurt of hot weather late in March and early April. Coming on top of an active Easter trade, rush orders were placed in many instances to take care of more hot days and the earlier than usual Mother's Day demand.

Looking at the first three months' performance of their counters, buyers are somewhat puzzled about the future. While there had been some inclination at the start to go slow on summer merchandise, thinking is now turning in the other direction, and monthly quotas are widely boosted both as to quantities and price ranges. At the same time, there is a noticeable trend to eliminate for the time being elaborate sales plans calling for separate promotions of seasonal items.

Admittedly this decision is not of the stores' own choosing. In view of their current lack of trained personnel it is the easiest way out in the majority of cases, especially as there has been a marked increase in number of customers. Whether this is due to a renewed wave of retail buying or the fact that women are giving up war work in increasing numbers is difficult to say. It is certain, though, that the tax-due date at March 15th, which used to bring a severe downward bend in store attendance and sales volume, hardly caused a ripple this year.

Buyers are rather optimistic in their outlook for the future. Most of them will have done half of their last year's business long before July. Customers show a sufficiently elastic attitude to their cosmetic wants to make it possible to switch them, not only from one item to another, but also from one group of cosmetics to a different one where temporary shortages make this necessary. This is often deliberate and done for the purpose of protecting low stocks of items which are difficult to obtain, while favoring groups of articles where the supply is good. Buyers hesitate to call this rationing; but it is generally understood that the maintenance of a well assorted stock is becoming increasingly important as we are approaching the end of the war. No store wants customers to drift to competing counters today. Regular customers for rare specialties are protected where they are known. It helps the manufacturer as much as the store; although there is no denying that it favors the items in which large stocks can be kept at hand.

Buyers are generally non-committal about the future of imported cosmetics upon their counters. Some frankly admit that the "hows and whys" of the situation are beyond their understanding and that they will postpone making a decision until they are forced to.

"pHisoderm"

B. Thurber Guild, M. D., pre'sident of Fairchild Brothers and Foster, has developed a modern synthetic skin detergent, known as "pHisoderm." It is produced in the form of a thick fluid cream which is hypo-allergenic containing no soap, no fatty acids, no alkali and no perfume or coloring matter. It has a pH value of 5.5, the same as that of the average of the normal skin. The technical description is "an emulsion (miscible with water) of petrolatum U.S.P., lanolin cholesterols, sodium p-ter-octylphenoxyethoxyethoxyethylether sulfonate, and water." Accepted by the Food and Drug Administration, "pHisoderm" is currently being marketed through the drug trade as a medical prescription item.

Compact Form

The 1945 version of cosmetic stockings appears to be in compact form. Elisabeth Rae-Lamont is offering Sheertone Rainproof-Buff-On Stockings in a trim little plastic compact. The product which appears somewhat softer than a cake make-up is said to have all the qualifications of Sheertone in the bottle, plus the convenience of the compact package that eliminates the hazard of spilling and breakage. The new type of Sheertone is applied with a wet sponge or a wet cotton pad, and then buffed. It comes in two shades, Sunglo, a soft rose beige, and Hawaii Tan, a deep beige. It does not replace liquid Sheertone but rather makes for a dual sale—the liquid preparation is suggested for home use and the compact for travel.

Shaving Creams

"Tide" continues to publish reports on sales of products of this industry. Latest is one on shaving creams which says that "shaving cream purchases by civilian males hit well over $20,000,000 during 1944." Our own figures show that much for brushless shaves alone, with lather type creams accounting for about $37,000,000 more. Getting back to "Tide," the average price paid is 33 cents and the lather-brushless ration is 47 per cent for lather and 53 per cent for brushless. This same source says that drug stores do 75 per cent of the business, syndicate and department stores 7 per cent each, and grocery, general stores, etc., 11 per cent.

Shaving Creams Again

While we're on the subject, a survey by the "American Legion Magazine" reported in this same issue of "Tide" says that "Typical of the findings was the report on shaving creams. As civilians, 22% of the men used brushless creams, 75% preferred regular types. As servicemen, 30% used brushless creams, while 67% stuck with the regular types. As ex-servicemen, 25% are using brushless creams, 72% the other variety. Reasons for the shifts to brushless were understandable: for convenience, faster shave, easier to use, and easier to carry.

"The drug survey revealed that 25.9% of the men found it necessary to switch brands when shopping in PX or ships' service stores. About 25% had trouble finding their favorite razor blades; 17% aftershave lotions, 12.9% certain shaving creams and 10.9% dentifrices. On the whole, 91% of the men reported they were buying the same brands they used prewar. Interestingly, 19.9% of the men objected to paying higher prices, as civilians, for items they previously bought at reduced prices in PX's."

GriGri

It isn't unusual for publicists to pour forth enchanted words about cosmetic products, but when the words come from the pen of a sales manager they deserve special mention. These do anyway. Francois Nazare, sales manager of Parfums Weil Paris Co. is the author, and the subject is Weil's new perfume "GriGri."

The letter addressed to toilet goods buyers reads: "This is the story of GriGri. But before we write of this lovely new fragrance by Weil, let us first detour together for a brief try at phonetic spelling. It would indeed be tragic (for Weil) if, because of insufficient information on how to pronounce GriGri, our lovely customers were to gargle with the name. The very thought of all those female epiglotides vibrating madly from one end of the country to the other, makes us cringe.

"GriGri is pronounced Gree Gree, and sounds a bit like the love call of a lonely little cricket lost in the ecstatic contemplation of a dew drop. To us, of course, the name is charming. Light hearted yet sentimental, indeed romantic if with a dash of the inconsequential in its plea. GriGri is not for the passionate, the inflamed, the acrobats, but Eros, God of Love, may have used it when he was young and enjoyed things."

Unusual Feat

Apparently W. Braun Co. feels that it accomplished quite a feat when it delivered merchandise within a forty day period when it meant finding the bottle, making the moulds and producing the bottle. It all came about when G. Barr & Co. makers of Balm-Barr decided to put on a special promotion in a professional size, 8 ounce, in addition to the usual 1 and 6 ounce, and turned to W. Braun Co., which has always taken care of all requirements for bottles.

Packaging Forum

By Josephine von Miklos

The Texture of Plastics—Most of the manufacturers of plastic materials and powders are agreed that their products have received somewhat of a black eye during the war. Although it was due to the ingenuity of plastic people that we had many of the containers we did have, the general public does not seem aware of the fact that it might not have had any satisfactory lipstick cases, rouge, cake-make-up boxes, etc. if plastics had not jumped into the breach which the total war use of brass, steel and aluminum had left wide open. All the general public knows is that plastic lipstick cases do, for the most part, not work as satisfactorily as do brass cases. And, how could they work as well. We have had to use contaminated and re-ground material; the really good plastics have not had half a chance. Although we were able to have plastic closures, we could not use many colors and had, in many cases, resort to spraying if we insisted on a color match. These and similar factors, reflecting well upon the ingenuity of both cosmetic and plastics manufacturers still have left the general consumer with a feeling that he or she would run as fast as possible when the good old metal cases come back again.

Now, I too believe that metal cases are in many ways superior to cases made of any other material. For one, women like their cosmetic cases to look like jewelry; they like a compact to be fairly heavy and a lipstick to match, in one way or another, the other items of embellishment which adorn their costume. Still, the case for plastics cannot be dismissed at this point. For plastics have one advantage which no other material has, that of color. However, color alone is not everything and this is where the designers and manufacturers of plastic things have to do some new kind of thinking. For there is one quality which seems to fill a basic human need but which has been grossly neglected by the plastic industry, that of texture. One hears time and again: "I don't like plastics, they're too slippery." The mould makers have gone all out for shiny and mirror-like surfaces; polishing methods have been developed which make plastic items look like glass. Still, human beings like texture. Texture can be used for utilitarian purposes, of course; ridges for better grip, for instance, have been used for a long time. But texture has not yet been really and successfully used for decorative purposes. And yet, we like sandblasted designs on glass; we admire the play of light and shadow which alternating dull and shining surfaces impart. Why not do it with plastic things? Why not use knurling and similar patterns in plastic moulds? Why not design decoration into the plastic material, rather than print it on later? Why not too, attempt to use two-tone effects, particularly where pieces are made of two parts, to a much greater extent than it has been done to date?

Even if the moulds would be, of course, more expensive, if they were sandblasted in part, or if patterns were cut into them, in the long run, they would pay off. For, if plastics are to stay in demand, the public must be taught that they are not substitutes for other materials but rather a substance which has unique and definite rights of its own. The time has come, it seems to me, when both mould makers and moulders had better put their heads together and start thinking in terms of new techniques, not just as far as the chemical miracles of plastic wizardry are concerned, but also in terms of full exploitation of such things as surface and texture. Only then will the plastic industry really reach the point where it will be beyond the scourge of the misunderstood conception of "synthetics" in relation to items such as cosmetics.

New Design

Matthew Products, Inc., is introducing its new packages designed by Egmont Arens. The Thermopine line consisting of pine bath oil, bubble bath, (liquid) foam bubble bath (powder) dusting powder and sachet has been newly packaged in a simple, stream lined design. The Sarong bubble bath, liquid and salts, eau de cologne, sachet, soap, dusting powder, have all been done in a dramatic modern design of brilliant red and green on white.

Get the Eye

That's the first thing to do in competitive retail selling. Pack your products in an attractive corrugated display box that protects in shipment and promotes at point of sale. Such a double duty package is a master salesman designed to attract customer's eyes and do a bang-up selling job at the same time. The result is more dealer cooperation — and more sales. It's an important thing to think about in the period just ahead.

H&D Post-War Packaging Idea

COUNTER DISPLAY BOX

Corrugated counter displays are rated "first" by thousands of retail dealers. Why? Because they are strong, sturdy, easy to handle, easy to set-up and above all, easy to look at. Because special printing and die-cut panels spotlight the product name and sales message. Because they're durable and long-lived. Get the complete story in our booklet "Pack to Attract." Write today.

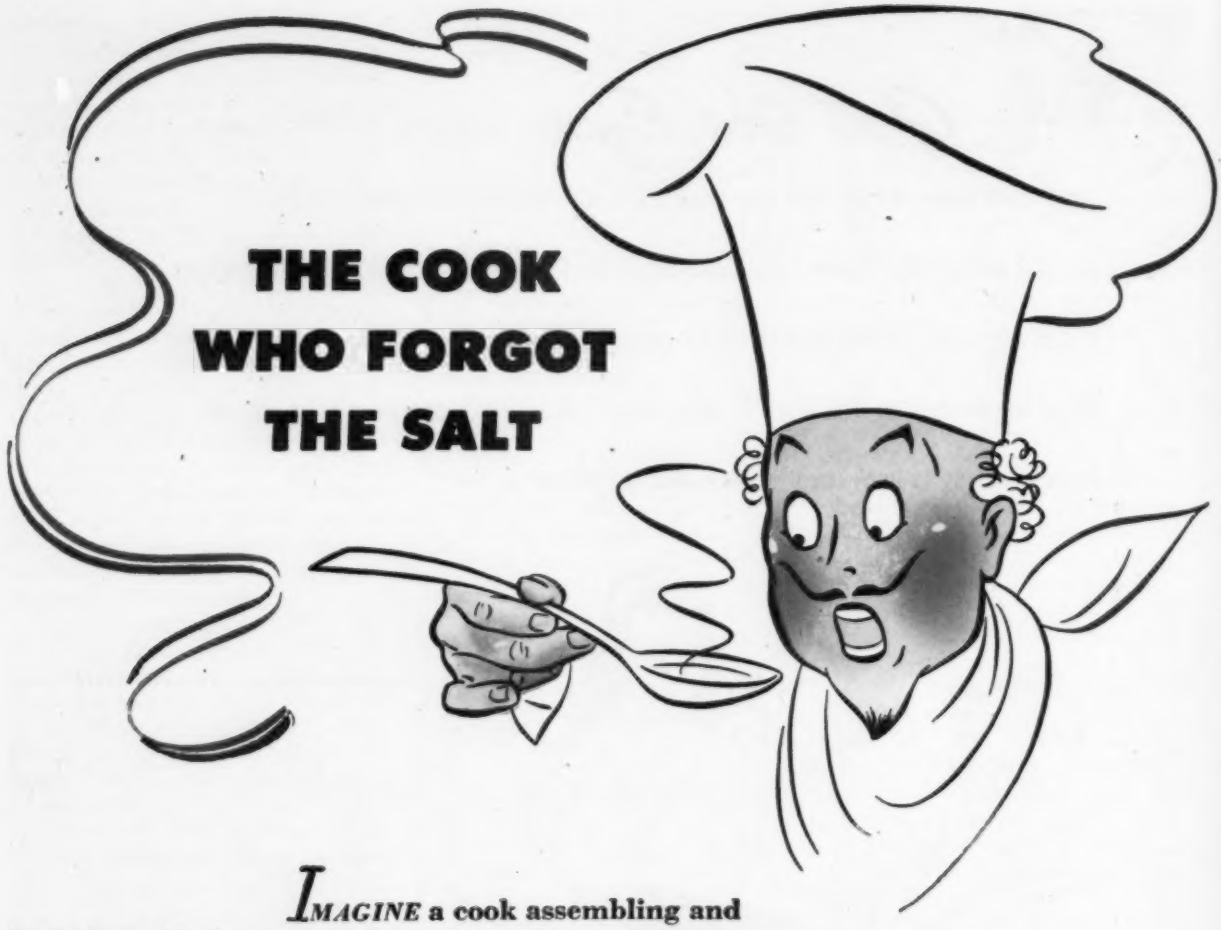
Hinde & Dauch

AUTHORITY ON PACKAGING

THE HINDE & DAUCH PAPER COMPANY, 4577 DECATUR STREET, SANDUSKY, OHIO

Factories in BALTIMORE • BOSTON • BUFFALO • CHICAGO • CLEVELAND • DETROIT • GLOUCESTER, N. J.
HOBOKEN • KANSAS CITY • LENOIR, N. C. • MONTREAL • RICHMOND • ST. LOUIS • SANDUSKY, OHIO • TORONTO

THE COOK WHO FORGOT THE SALT



IMAGINE **a cook assembling and blending all the ingredients of a culinary masterpiece, and forgetting the *one* element without which it must taste flat, insipid and unappealing. Or, imagine a manufacturer scrutinizing every feature of a proposed package *except* the selling element.**

Perhaps no good cook ever forgets the salt, but many a group of highly intelligent executives, while laboring to procure a successful package, have slighted the *one* element without which NO package can help a product sell.

They have considered material, structure, production and cost . . . capacity to protect, dispense and identify the product . . . what sizes and shapes would be most convenient to handle, to stack and display . . . and have lost sight of the basic fact that, with all those essentials attended to, the *selling power* of a package STILL depends on *how the finished package looks!*

When Ritchie is called upon to design a package, Ritchie engineers and designers integrate *all* the multiple and complex factors involved to create—at low cost—a functionally efficient package that is *also* pleasingly attractive to the eye! That's why a Package by Ritchie *stands out!* That's why a Package by Ritchie SELLS!

THE 5 ESSENTIALS OF A SELLING PACKAGE

1. It must be practical, production-planned, economical to manufacture, easy to fill or pack.
2. It must fully protect and conveniently dispense the product.
3. It must be easy to handle, to stack, display.
4. It must *proclaim* the quality and identity of your product.
5. It must be notably "good looking," memorable, ATTRACTIVE!

W. C. *Ritchie* and COMPANY

8822 Baltimore Avenue, Chicago 17

NEW YORK • DETROIT • LOS ANGELES • ST. LOUIS • MINNEAPOLIS

Set-Up Paper Boxes • Fibre Cans • Transparent Packages

Gay packaging for the new DuBarry make-up, Strawberry and Cream, has a country feeling inspired by a strawberry patch in the sunlight, and suggests a basket in the way it holds lipstick and face powder.

Parfums Weil has repackaged its popular Zibeline bath oil and offers it under the intriguing name of "Secret of Venus" in an attractive design of ivory and blue.

The La Cross "New Era" nail ensemble holds nail polish, remover, cuticle remover, emery board, and orange wood stick, which fit firmly into a plastic base grooved to hold the products.

Fashion Point

The Campana Sales Co. is offering a companion product to its Solitair cake make-up. It is Solitair lipstick. The really big news about this new Solitair lipstick is its point, according to I. Willard Crull, president of Campana. He says, "It is lip-shaped. We call this newly developed point a 'fashion point.' We think that it may be one of the biggest improvements in lipstick construction and design that has happened for a good many years. It is exclusive with us and is so unique that we have been granted a patent on it by the government. The idea for it originated in the observation that many women, whether they start with a bullet or wedge shaped lipstick point, wear the point down in use to approximately the shape of our new 'fashion point.' Proceeding from this initial observation, we snooped and surveyed rather extensively and came up with the rather surprising fact that better than 54 per cent of women do actually wear their lipsticks down just this way. Strangely enough we found many a woman who even used a razor blade or knife to alter the point in a new lipstick to a shape similar to our 'fashion point.' Proceeding from there we have tested this new fashion point pretty widely now for better than a year and the evidence is conclusive that it does represent a very worthwhile improvement, enabling a woman to apply the lipstick easier, cleaner and more accurately." Attention is also called to the fact that the lipstick is packaged in a metal case. It retails for $1.00.

Strawberry and Cream

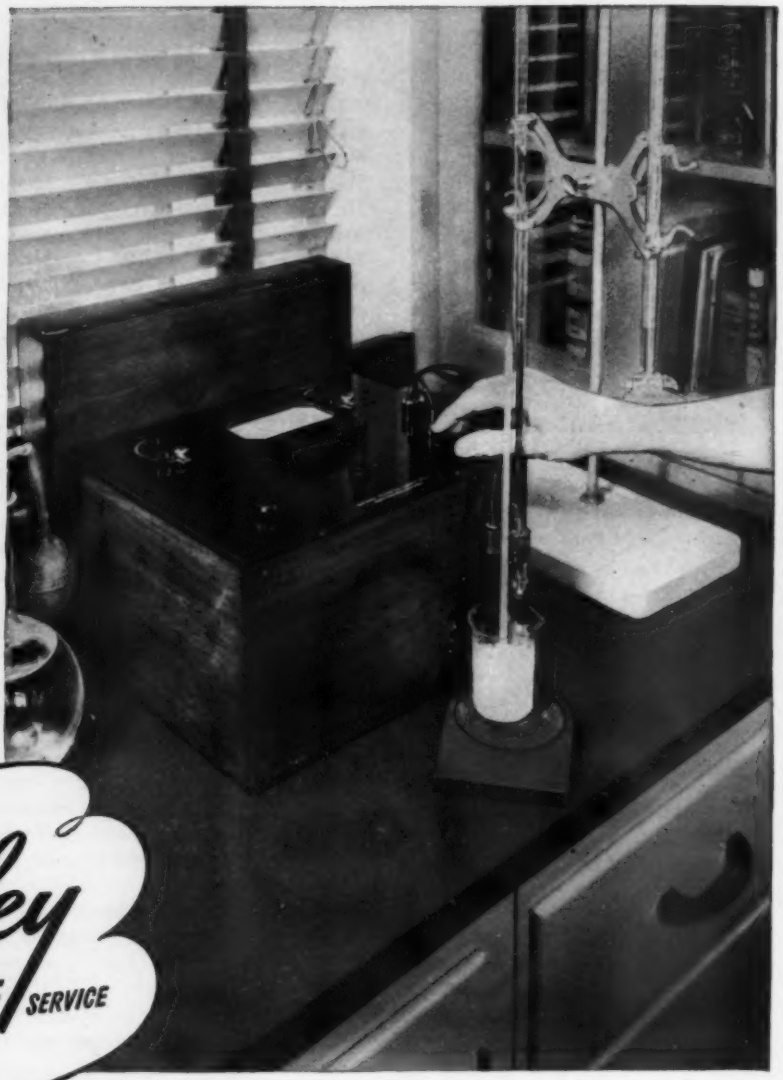
Richard Hudnut's "Strawberry and Cream" make-up package has a country feeling. The carton designed by Enid Edson, was inspired by a strawberry patch in the spring sunlight. It has vivid blues, intense green and red, and bright yellow, and suggests a basket in the way it holds the new lipstick and face powder. The Strawberry lipstick, a ripe rosy red, is tied onto a tray decorated with strawberries by a white ribbon. There is a cut-out cream pitcher above the box of Cream face powder which rests under the little tray. The package retails at $2. B. Altman & Co. introduced it in New York in April. Besides being an excellent make-up idea for that fresh and pretty look for the summer of 1945 which the fashion prophets have been forecasting, Strawberry and Cream lends itself well to many promotion possibilities.

Cupid's Dream is a Lejeune perfume presentation packaged in gold, crystal and plastic. A 1-¾ dram bottle is mounted on a Lucite base, surmounted on a gold plated metal lily, and covered with an acetate top.

GriGri is the name of a new perfume introduced by Parfums Weil. GriGri, pronounced Gree Gree, is a sentimental, romantic fragrance presented in an attractive chartreuse and maroon package.

The big news about Solitair lipstick is the point on it which is lip-shaped, permitting easier and more accurate application of the lipstick. Another feature is the shining black and white metal case.

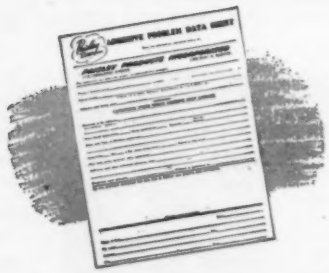
Determining the pH of a dextrine by means of a glass electrode potentiometer. This test is performed several times on every batch as a control for uniformity.



HOW DO YOU BUY Adhesives?

Paisley
SCIENTIFIC ADHESIVE SERVICE

HAVE you eliminated all the guesswork from your Adhesive purchases? Do you always get the ONE best Adhesive for the job? Modern Paisley Scientific Adhesive Service now brings you not only the most efficient and economical bonding agent for all packaging and manufacturing operations, but assumes responsibility for continued satisfactory performance. Let our skilled Adhesive Chemical Engineers relieve you of all Adhesive worries. Simply tell them your problems on the data sheet we supply. After exhaustive study and laboratory tests, they'll suggest the best, modern Adhesive to use and through periodic testing of laboratory samples keep constant control of its efficiency.



SEND FOR *this Adhesive Problem Data Sheet. It's your guide to getting the ONE best, most efficient adhesive for the specific operation you describe. Trial shipment will be sent ON APPROVAL if desired. If you are not entirely satisfied, we'll gladly cancel the invoice. This skilled laboratory service does not obligate you. It's the SURE . . . the* modern *way to buy adhesives.*

PAISLEY PRODUCTS INCORPORATED

Manufacturers of Glues, Pastes, Resin Adhesives, Cements, and Related Chemical Products

1770 CANALPORT AVE., CHICAGO 16, ILL. ★ 630 W. 51st STREET, NEW YORK 19, N. Y.

DESIGN RUNS RAMPANT.

In addition to supplying plastic Caps, Rouge Boxes and Lipstick Containers, Fontaine's expanded facilities now add extra appeal to • • • your cosmetic package through silk screening, spraying and metallic finishes.

THE FONTAINE LINE

CAPS AND CLOSURES
Ball caps, 18-20-22 mm.
Ridged edged caps, 8-10-13-15 mm., standard GCA threads.
Wood closures for men's and women's toilet waters.
Others in all sizes and colors.

LIPSTICK CONTAINERS AND ROUGE BOXES
Swivel or push-up Lipstick Containers.
2 standard Rouge Box styles in three sizes. Others.

DECORATIVE PROCESSES
Silk Screening, Gold Leaf Printing and Spraying. Designs created.

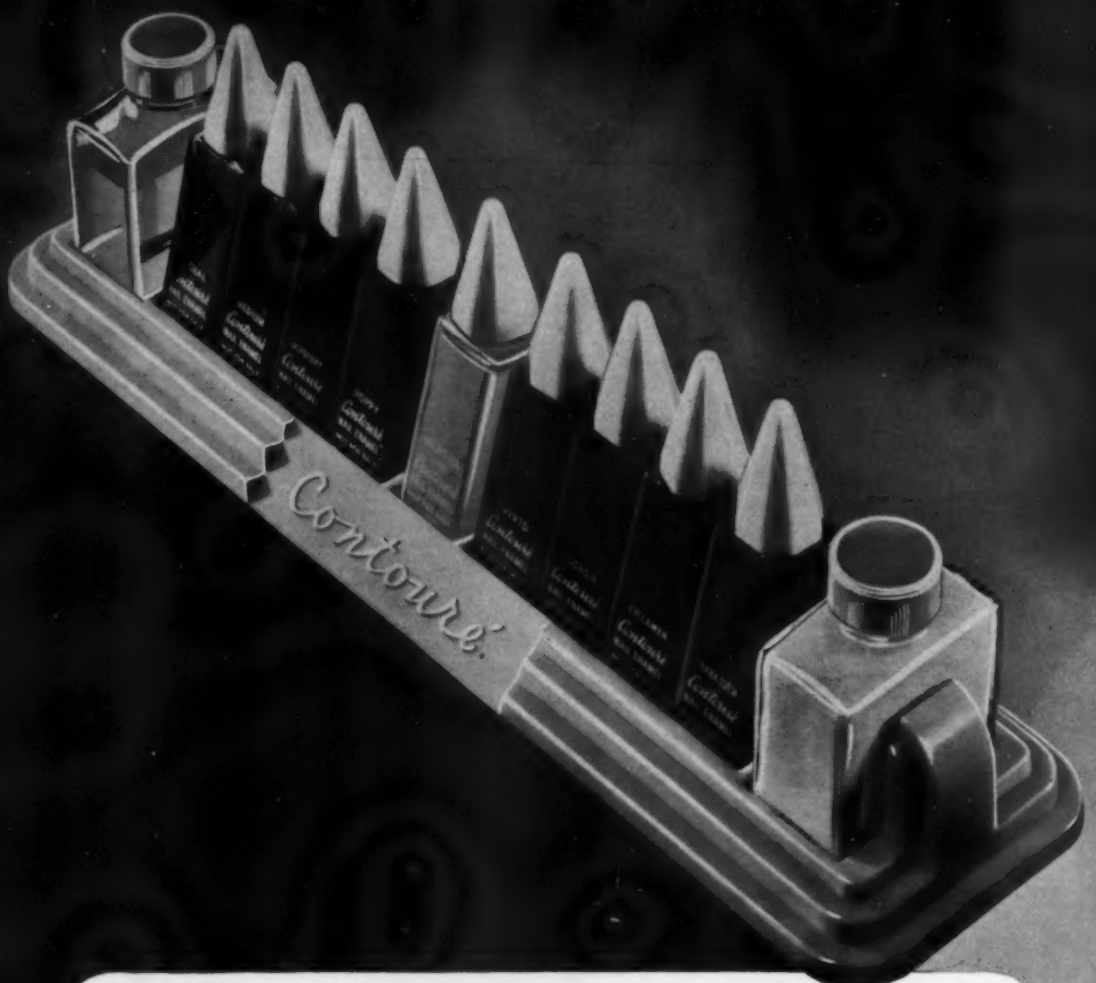
METALLIC FINISHES
in gold, silver and sparkling colors on glass, plastic and base metals.

• For Decorative Processes, write CONTAINER FINISHING CO., an Affiliate of

FONTAINE PRODUCTS CO. • *Art In Plastics* • 306 E. 61st ST., NEW YORK 21

Plaskon MOLDED COLOR CLOSURES

on America's Finest Merchandise



PLASKON is a plastic molding material available in a wide range of permanent colors, that will harmonize with every product need. It can be molded into unusual shapes and designs, to secure eye-catching distinction for your product.

Plaskon is completely impervious to the effects of alcohol, acetone, or other common organic solvents. It is not affected by oils and fats; is odorless, tasteless and inert. For safe, attractive containers and closures for your merchandise, ask your molder to demonstrate all of Plaskon's advantages.

PLASKON DIVISION
LIBBEY • OWENS • FORD GLASS COMPANY
2110 Sylvan Avenue • Toledo 6, Ohio
Canadian Agent: Canadian Industries, Ltd., Montreal, P. Q.

PLASKON
TRADE MARK REGISTERED
MOLDED COLOR

For CORK Closures . . . Call on DODGE

Product protection and "sales sense" were big factors in the choice of these special Dodge Milbossed Top Corks, designed and produced for Dodge & Olcott, Schimmel, and Hynson, Wescott & Dunning, Inc. They provide a perfect seal . . . are distinctive, neat, attractive. And they have the additional advantage of being unaffected by the contents of the bottle. Dodge Milbossed Top Corks are 100% effective for sealing and selling.

This standard Dodge Milbossed Top Cork can, like the special patterns, be finished in attractive colors. The hardwood top takes a clean, sharp impression and the knurled edge provides a good grip for easy removal. Uniform, true-to-grade cork shanks have smooth sides and are slightly tapered to provide a perfect seal.

Dodge standard taper corks are available in a complete range of sizes to fit all standard bottles. The Dodge system of grading cork assures the buyer of unusually uniform quality. If economical taper corks meet your requirements, contact Dodge. Send specifications as to size, type and quality.

DODGE cork closures are dependable, safe-sealing, efficient and economical.

Cork's sealing qualities protect your product . . . provide a tight seal and re-seal regardless of temperature changes. The handsome designs and smart finishes of Dodge Milbossed Top Corks add sales appeal to your package. And the convenience and ease with which they can be removed and replaced please your customers.

Many years of specialization in cork closure design and manufacture have made Dodge experts in this phase of packaging. Dodge has a wide experience in designing for specific needs and a varied line of closures to meet all requirements. Dodge also has facilities for large quantity production and prompt delivery.

Consult Dodge . . . for special cork closures . . . for standard taper corks . . . that will give paramount satisfaction. Write today.

DODGE CORK COMPANY, INC., LANCASTER, PA.

DODGE CORK Closures

Designed to Guard the Integrity of the Contents

She just heard the Emporium has a new line of cosmetics that come in those classy, modern Foster-Forbes Cosmetic Bottles!

FOSTER-FORBES
Cosmetic Bottles

FOSTER-FORBES GLASS CO., MARION, INDIANA, U. S. A.

SALES REPRESENTATIVES: KANSAS CITY • DETROIT • CINCINNATI • CHICAGO • CLEVELAND
MILWAUKEE • ST. PAUL • ST. LOUIS • ATLANTA • NEW YORK • MEMPHIS • LOUISVILLE • HAVANA, CUBA

THINGS TO LOOK FORWARD TO:

HANDY UNIT-PACKAGES

for creams and ointments

EASY TO OPEN. Simply tear along the embossed line to open the neck of the "tube"

EASY TO USE. Squeezes like a tube. Folding back open end protects unused contents.

*Package and machines developed and patented by Ivers-Lee Co., Newark, N. J.

No postwar pipe dream, but a package that is ready to go when the WPB switches on the green light. Tests are complete. Machines are perfected.*

It is another ingenious application of the superior protective properties of Alcoa Aluminum Foil, heat-sealed, whereby air, light, dirt, and germs may be completely shut out and moisture sealed in. The contents are protected from harmful changes.

User convenience is obvious. Easy to carry in purse or pocket. Simple to open, use, and dispose of. No drying out. Contents always fresh.

A low package cost is a major advantage. The materials are inexpensive and high speed, automatic machines will form and fill the package economically—millions a day if desired.

This is but one of many new developments in the use of Alcoa Aluminum Foil. Whatever your product, think of Alcoa Foil for tomorrow's packages. If you'd like to share your thoughts with practical-minded foil experts, write ALUMINUM COMPANY OF AMERICA, 1913 Gulf Building, Pittsburgh 19, Pennsylvania.

ALCOA

ALCOA ALUMINUM FOIL

Clearsite*
Plastic CONTAINERS
—give BETTER protection—FINER appearance to thousands of quality products. . .
SHATTERPROOF
FEATHERLITE
SEAMLESS
COLORFUL
LABEL IMPRINTED DIRECTLY ON CONTAINER DURING MANUFACTURING PROCESS
Within certain limits almost everything that needs packaging protection becomes a candidate for CLEARSITE containers when styling is considered. That's because the inherent advantages of CLEARSITE offer greater security to products and increased display value and added Sales Appeal.
Ask our Package-Engineers for suggestions, without obligation!
*Reg. U. S. Pat. Off.

CELLUPLASTIC CORP.

CELLUPLASTIC CORPORATION

EXTRUSION AND INJECTION MOLDERS

60 AVENUE L NEWARK, N. J.

WEST COAST REPRESENTATIVES CONTAINER SERVICE CO., 1266 North Western Avenue, Los Angeles 27, Cal.

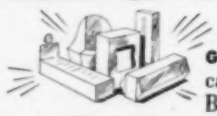
Wall paper suqqestion for the office of every folding carton user...

IT'S A GOOD IDEA to keep reminding yourself that the greater the eye-value of your package, the bigger the break it will get in tomorrow's self-serve stores and open displays. It will need that break. For impulse or pick-up sales already account for a tremendous volume. Tomorrow, it will be even larger.

EYE-CATCHING folding cartons start with the right board. And many of America's leading folding carton users will tell you that the "right board" is *Coated* Lithwite. They'll show you how brilliantly colors come up on this revolutionary board . . . how sharply product illustrations reproduce with a tempting, life-like realism that makes hands reach for them.

COATED LITHWITE is unusually white. Its surface is hard, smooth, free from chalkiness. Forms a perfect base for plates and inks. Its rich, velvety feel says *quality*. Add Gardner-Richardson's fine press work, precise methods, skilled plate-making, careful make-ready, thorough checking . . . and it all adds up to folding cartons that give your product a real advantage.

SIX YEARS of Gardner-Richardson experience and technical improvement are behind *Coated* Lithwite — the original paperboard, made and coated in one continuous, high speed operation. Manufactured to rigid G-R standards, *Coated* Lithwite gives eye-catching printing quality, folds and scores without flaking, takes a positive seal, speeds through filling machines.



GET STARTED, NOW. Find out how *coated* Lithwite can improve the eye-appeal of your folding cartons. Be ready, when new orders for *Coated* Lithwite *can* be filled (at present, we're sold up!) . . . to get the jump on your competition with a folding carton that does a better selling job, gives your product a shelf and display advantage. Put your problem up to our technical and merchandising specialists. They'll jump at the chance to show you what can be done with ingenuity, know-how . . . *and Coated* Lithwite. Write, today.

The GARDNER-RICHARDSON Co.

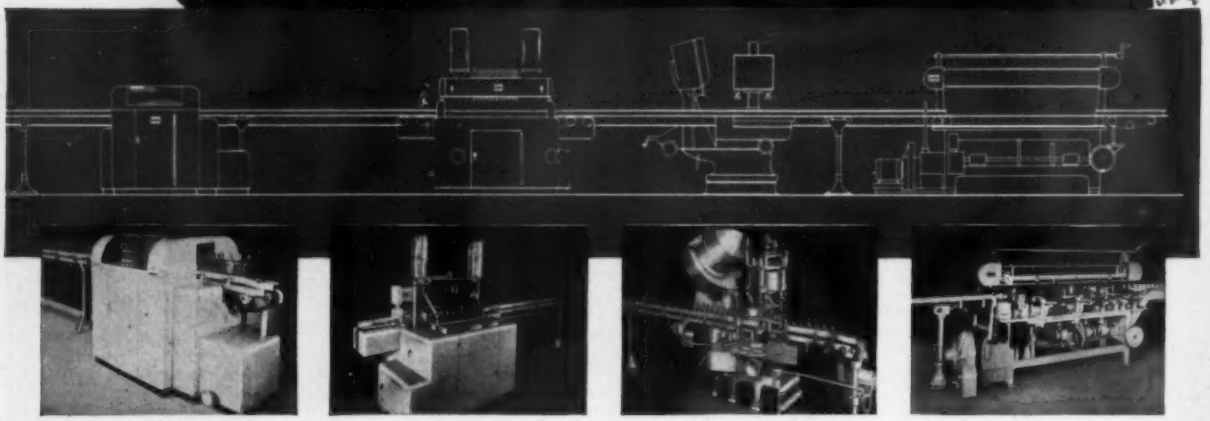
Manufacturers of Folding Cartons and Boxboard

MIDDLETOWN, OHIO

Sales Representatives in Principal Cities: PHILADELPHIA · CLEVELAND · CHICAGO · ST. LOUIS · NEW YORK · BOSTON · PITTSBURGH · DETROIT

Quartet

IN PERFECT HARMONY



CLEANER

FILLER

CAPPER

LABELER

Pneumatic can furnish you with start-to-finish coordinated bottling machinery hook-ups: cleaner . . . filler . . . capper . . . labeler. There are important advantages in buying an All-Pneumatic Bottling Line: 1) undivided responsibility—the whole line is installed and serviced by Pneumatic factory-trained engineers; 2) machines are synchronized to operate as a unit; 3) all machines in the line are under *one* guarantee—a Pneumatic Guarantee that they will operate in accordance with contract specifications; 4) flexibility of Pneumatic Machines makes it practical to handle a wide range of sizes on an All-Pneumatic Line. PNEUMATIC SCALE CORPORATION, LTD., 70 Newport Avenue, No. Quincy 71, Massachusetts. Branch Offices: New York 6, Chicago 1, San Francisco 11, Los Angeles 13.

PNEUMATIC

PACKAGING & BOTTLING MACHINERY

SAND

Ever try to melt it?

IF you want to tackle a tough job, just try melting some silica sand. Terrific heat is required. Before you got the temperature high enough, steel would run like water. The most heat-resistant furnace linings would fail. Yet, in order to make glass, silica sand must be melted.

Fortunately, a long time ago, someone discovered a very helpful trick. If some other materials were mixed with the sand, it could be melted at practical temperatures. Scientists call such materials "fluxes." If it weren't for fluxes there probably wouldn't be a glass industry today.

But as is so often the case, it's easy to get too much of a good thing. If the glassmaker yields to the temptation to make the melting job a little easier by putting in more of these materials, the glass produced will be of inferior quality.

The best glass for all normal uses is the glass that has the highest percentage of pure silica sand in its make-up. The ideal bottle—although it couldn't be made commercially—would be made of almost pure melted sand.

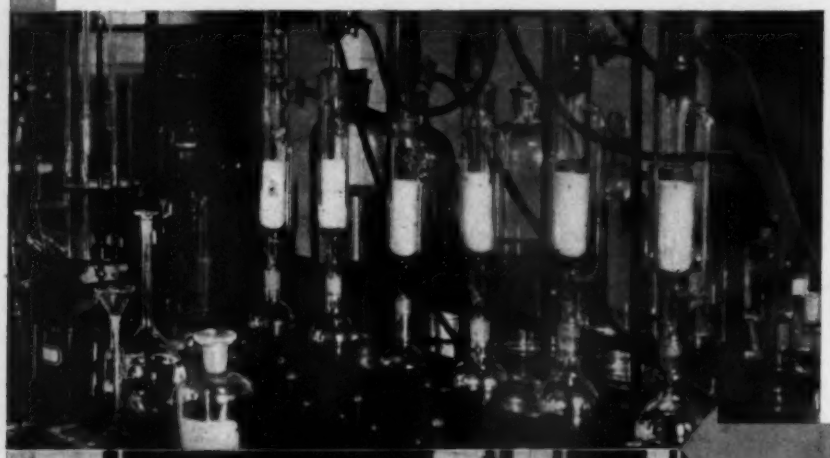
It is easy to see, once you understand these simple facts about glassmaking, that quality is determined to a large degree by the way the glassmaker tackles that basic problem of melting silica sand.

Armstrong's glassmakers, through long experience and constant research, have learned a lot about sand melting. What they know—and the integrity with which they apply it—is an important factor in the uniform high quality of Armstrong's Glass.

For further interesting information on the making of good glass, send for your free copy of "Men and Glass." Address Armstrong Cork Company, Glass and Closure Division, 3805 Prince Street, Lancaster, Pennsylvania.

ARMSTRONG'S GLASS
and
ARMSTRONG'S CLOSURES

PYREX GLASSWARE
BRAND



Your Partner in Quality Control

T.M. REG. PYREX U.S. PAT. OFF.

UNDER the momentum of war production, laboratory control has made great strides in the food industry and is destined to become an even more important factor in food processing in the postwar era.

Always a partner in food research, Pyrex brand Laboratory Glassware is playing an equally vital part in food processing control. Fabricated from Pyrex brand Chemical Glass, No. 774, this glassware possesses balanced properties that appeal particularly to the food chemist. Its physical and chemical characteristics are so balanced that all the properties—mechanical strength, chemical stability and heat resistance—essential for economy, accuracy and durability, are combined and maintained at maximum value.

Low in alkali-content, unsurpassed in stability in sterilization and containing no elements of the magnesia-lime-zinc group or heavy metals, Pyrex brand Laboratory Ware offers the all-around laboratory glassware for all-around use in food research and processing control.

If you do not have a copy of Corning's Laboratory Catalog LP 24 send for one today. Address Laboratory and Pharmaceutical Sales Dept., Corning Glass Works, Corning, N. Y.

"PYREX" is a registered trade-mark and indicates manufacture by
CORNING GLASS WORKS • CORNING, NEW YORK

FOR FOOD RESEARCH AND CONTROL

PYREX brand LABORATORY GLASSWARE

CORNING *means* Research in Glass

Meritseal

smart in more ways than one

Meritseal is not only a smart looking closure. It is also a very efficient seal. Its trim appearance and gleaming beauty are in keeping with the finest cosmetic products . . . yet its cost is less than many closures of comparable good looks.

This combination of handsome appearance and modest price is made possible by Meritseal's novel construction. Scores of well known cosmetic manufacturers use Meritseal and are delighted with results. Write for samples and full information.

CROWN CORK SPECIALTY CORPORATION
DECATUR, ILLINOIS
Division of Crown Cork & Seal Company

BRIDGEPORT...

For the past two years our facilities have been devoted almost exclusively to the production of war materials. We have been fortunate, in that we have been able to handle this work on the same equipment used for our regular peace time products, and, consequently, when material again becomes available for lipstick containers, vanity cases and other metal cosmetic items we will be prepared to start producing our regular line immediately. If you too are planning your post war program, we will be glad to assist you.

THE *BRIDGEPORT* METAL GOODS MFG. CO.

Established 1909

BRIDGEPORT 'PHONE: BRIDGEPORT 3-3125 CONNECTICUT

VANITY CASES • ROUGE CASES • PASTE ROUGE CONTAINERS • LIPSTICK HOLDERS (ALL TYPES) • POWDER BOX COVERS • EYEBROW PENCIL HOLDERS • BOTTLE CAPS • JAR CAPS • METAL NOVELTIES TO ORDER

STAINLESS STEEL MIXING *and* STORAGE TANKS

Depend on San-I-Tanks for safe handling of all your liquids and chemical preparations. The ideal tank for storage, mixing or processing purposes. Built by tank specialists, San-I-Tanks incorporate every time saving, money saving feature. For special tank adaptations consult our engineers for their recommendations, no obligations, of course.

Government restrictions prevent deliveries at present of stainless tanks for the processing of cosmetics and toiletries. We invite your inquiries for delivery at future date

√CHECK THESE PRODUCTION and EFFICIENCY INCREASING FEATURES

Fabricated throughout of 18-8 Stainless Steel, No. 4 polish on inside, bright finish outside. San-I-Tanks are built to last.

All inside welds are ground smooth and polished. San-I-Tanks are built right throughout.

San-I-Tanks incorporate special self-draining features with specially formed bottoms sloping to the front.

San-I-Tanks are rust-resistant, easy to keep clean and sanitary because of their Stainless Steel construction.

Many special extras available in stock for San-I-Tanks such as covers, motors, agitators, etc.

Built by craftsmen with years of tank building experience—you are assured of years of trouble free, efficient service when you insist on San-I-Tanks.

METAL-GLASS PRODUCTS CO. Dept. D Belding, Mich.

THERE'S MORE TO IT THAN KNOWING HOW

You often hear it said—"it all depends on knowing how." We can't agree with that completely. To know how is important, of course, but perfection in performance comes only from long and constant practice.

In making glass containers, for example, we know that ingredients should be measured with the utmost possible care . . . and we do it. We know that molds should be made with microscopic precision . . . and we do it. We know that in manufacturing and in inspecting, there are no unimportant details. From one end of our organization to the other, doing things right is a habit developed by long and constant practice.

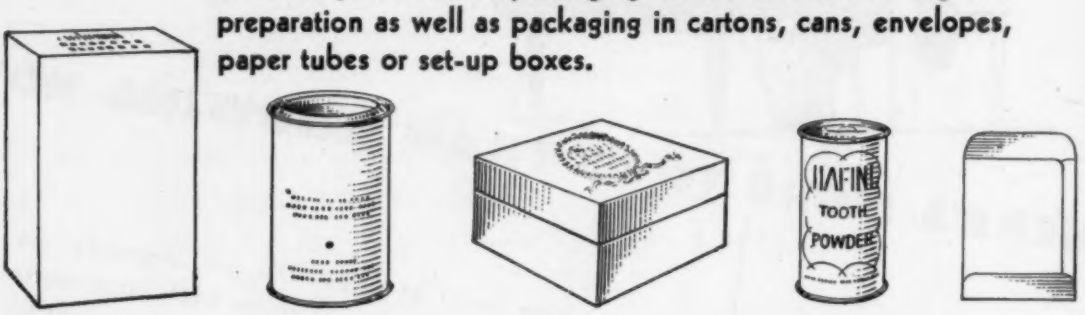
CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE, MD. • *New York Office:* 500 Fifth Avenue • *Chicago Office:* 1502 Merchandise Mart

Yes Sir!
We Can Package Them For You

Open capacity now available on High Speed Automatic Machinery for packaging dry powders - drugs - cosmetics - chemicals.

Our complete custom packaging service includes mixing and preparation as well as packaging in cartons, cans, envelopes, paper tubes or set-up boxes.



The Stevens-Wiley Manufacturing Co., Inc.

Hancock, Palethorp & W. Berks Streets, Philadelphia 22, Pa.

Phones—Regent 1616-1617

Over ⅓ Century of Dependability

- BOTTLES
- JARS
- CLOSURES

...and remember, Ceramic coloring and lettering at our GLASSCRAFTERS Division

W. BRAUN CO.

300 N. CANAL ST. . . . CHICAGO 6, ILL.

SHEET METAL GOODS

SPRINKLER TOPS

CORK TOPS DOSE CAPS

CONSOLIDATED FRUIT JAR COMPANY

NEW BRUNSWICK, N. J.

TERPIN HYDRATE

SEYDEL

U. S. P.
CRYSTALS and POWDER

Comprehensive Booklet Available on Request.

SEYDEL CHEMICAL CO.

ESTABLISHED 1904 JERSEY CITY 2, N. J.

If you've been coasting in a seller's market

★War-born shortages have conditioned the consuming public to an acceptance of almost anything available, no matter how it's presented. But if merchandising history can be trusted, the pendulum will swing to the opposite extreme—buyers will be critical when an abundance of everything is again on the market; quality, appearance and convenience will again be the governing factors in sales.

Why not plan now to improve your postwar sales position with Anchorglass packaging! In Anchorglass, the quality and color of your product will speak for itself. In Anchorglass, the eye- and buy-appeal of your product is far ahead of products that are "hidden" by other methods of packaging. In Anchorglass packages all the original flavor, taste or other qualities are preserved intact until the last bit is used.

There's a combination of light, strong Anchorglass container and matched Anchor Cap that will fit your product and production requirements perfectly. Let us show you now how to lead the field with the kind of packaging your postwar customers will want!

Hear how Anchor Hocking is educating millions of your customers and retailers every week to the advantages of modern glass packaging—"Meet Corliss Archer" every Thursday evening, entire Coast-to-Coast Network, CBS.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO

BEAUTY SELLS BETTER IN PLASTICS

YOU KNOW how much better cosmetics sell when they're showcased in shimmering plastics.

But perhaps (because after all, you don't live with plastics as we do) you *don't* know how many cosmetic manufacturers are planning postwar packaging now.

It will have to be "first come, first served," of course. Let's talk your problems over *now!*

Kurz-Kasch invented the screw-top Plastic Rouge Box—has been a big name in cosmetic packaging ever since. For containers for cream rouge, dry rouge, mascara, face powder or lipstick . . . for stock or custom molds . . . consult Kurz-Kasch.

KURZ-KASCH

For over 25 years Planners and Molders in Plastics

Kurz-Kasch, Inc., 1421 South Broadway, Dayton 1, Ohio
Branch Sales Offices: New York • Chicago • Detroit • Indianapolis
Los Angeles • Dallas • St. Louis • Toronto, Canada
Export Offices: 89 Broad Street, New York City

NEW!
UNIQUE!
DISTINCTIVE!

SALES-STIMULATING!

We are happy to announce to the trade that we are prepared to distribute these two newly created, unusual, highly attractive Glass Stoppered Bottles, as shown here, *in one-half ounce and one ounce sizes!* For full particulars, prices, etc., WRITE US AT ONCE!

OTHER ITEMS WE CAN SUPPLY:

Plastic & Metal Closures for the Cosmetic Trade in a Variety of Designs and Colors

Bottles and Jars in Opal and Flint

Specializing in Enameling and Silk Screening

Samples on Request!

RICHFORD
CORPORATION

221 FOURTH AVE. • NEW YORK 3, N. Y.

P. E. Roehrich, President

AL 4-4958 AL 4-9656

TEXAS STATE COLLEGE FOR WOMEN
LIBRARY

Eye-Catching!

YES...IT'S A WARNERCRAFT PACKAGE THAT CAUGHT HER EYE!

Products which promise beauty should have about them an aura of beauty . . . for they create a dream in women's minds of long sought after perfection. This intriguing, eye-pleasing appearance is a further stimulus to a woman's buying urge. The pretty box, the delicate container, the enchanting package which she can visualize gracing her dressing-table . . . will most often be the one she places there.

WARNERCRAFTSMEN have long used in their designing for the cosmetic industry, the formula of Fact, Fantasy and Fabrication . . . a sense of reality, a coating of Fairyland, and a sound, strong construction of proven workmanship that can stand up under any unusual shipping condition.

Consult with WARNER BROTHERS now and let them plan and develop with you the post-war package that will be a thing of beauty . . . a promise of sales.

Warnercraft Tekwood* is one of the many new packaging improvements developed by Warnercraftsmen for post-war use. Light in weight as cardboard, yet many times as strong, it is adaptable to any type of covering. It is especially suitable for boxes intended for re-use.

*REG. U. S. PAT. OFF.

WARNERCRAFT

"THE FINEST WORD IN PACKAGING"

Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.

THE WARNER BROTHERS COMPANY

Main Office and Factory: 325 Lafayette Street, Bridgeport, Conn.
New York Sales Office: 200 Madison Avenue, New York, N. Y.

ONE OF 96 DOW CHEMICALS USED BY THE PHARMACEUTICAL INDUSTRY

Try this for size

How Methocel Improves Printing Gloss

Printing buyers frequently desire an exceptionally high gloss finish in printing inks. To get this effect, it has been necessary to varnish the paper after printing—a rather costly, time-consuming procedure.

When printers, ink producers, and paper manufacturers sought a better way to obtain gloss printing, Dow research men experimented . . . tested . . . suggested Methocel.

The results have exceeded all expectations. Paper, even paper board, can be sized with Methocel to prevent excessive and uneven penetration of printing inks—it keeps them on the surface of the paper where they produce a high, uniform gloss. In addition, paper sized with Methocel resists oily or greasy materials and prevents penetration of varnishes applied to its surface.

If you have a sizing problem in your industry, Methocel—water soluble Dow Methylcellulose of exceptional purity and uniformity—may provide the answer. Technicians at any of the Dow sales offices will be glad to consult with you.

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

New York · Boston · Philadelphia · Washington · Cleveland · Detroit · Chicago
St. Louis · Houston · San Francisco · Los Angeles · Seattle

Methocel

Water Soluble Dow Methylcellulose

DOW

CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY

NEWS...

Fred Stock Joins Pfizer

Fred J. Stock has resigned his position as Chief of the Drug and Cosmetics Branch of the Chemicals Division of the

FRED J. STOCK

WPB becoming associated May 15 with Chas. Pfizer & Co., New York, as coordinator of sales and production. Mr. Stock, who came to the WPB from the Walgreen Company, Chicago, has served in his Government position four years performing one of the outstanding jobs in Washington.

Warner Appoints Dr. Gilbert

Dr. Max Gilbert has been appointed medical director of William R. Warner & Co., Inc. Dr. Gilbert will direct the professional service department and will be in charge of clinical development of new products, research service and clinical investigation.

Batson Succeeds Stock in WPB

John T. Batson has been appointed Chief of the Drug and Cosmetic Section of the Chemical Division of the War Production Board. Mr. Batson, who succeeds Frederick J. Stock, has been with the Division for more than three years and during a good part of this time he served as Deputy Administrtator under Mr. Stock.

Curran Elected Vice-President

Robert E. Curran, secretary and treasurer of Charles of the Ritz, New York, has been elected executive vice-president.

Dr. Nelson Elected to Burroughs Wellcome Board

Dr. Erwin E. Nelson, director of the Wellcome Research Laboratories, Tuckahoe, N. Y., has been elected a member of the board of directors of Burroughs Wellcome & Co. (U.S.A.) Inc.

Dr. Nelson became director of the Wellcome Research Laboratories in June 1943. He was formerly professor of pharmacology at Tulane University of Louisiana School of Medicine, and also served as chief of the division of pharmacology, Food and Drug Administration, Washington. He is a member of the Revision Committee of the U.S. Pharmacopoeia and is chairman of the subcommittee on biological assays.

Abbott Advances Campbell

The promotion of Frank P. Campbell to assistant sales manager in charge of distribution and traffic has been announced by Raymond E. Horn, vice-president and general sales manager of Abbott Laboratories.

FRANK P. CAMPBELL

Mr. Campbell was with John T. Milliken & Co. in 1928 when it was purchased by Abbott Laboratories. In 1929 he was placed in charge of Abbott's adjustment department and in 1931 promoted to traffic manager.

McDaniel Resigns from Vitamins Plus

E. D. McDaniel has resigned as general manager of Vitamins Plus Division, Vick Chemical Company, to become secretary of the Associated Chain Drug Stores Association.

Dr. Gibbs Becomes Consultant

Dr. Owen S. Gibbs, medical research director of Plough, Inc., since 1941, has established his own research consulting business with headquarters at 1544 Netherwood, Memphis 6. He will specialize in pharmacological work.

Following his graduation from the University of Edinburgh, he was appointed assistant to the late Dr. A. R. Cushny, professor of pharmacology at the University of Edinburgh. Dr. Gibbs has held the chair of pharma-

O. S. GIBBS

cology at Dalhousie University, Halifax, N. S., University of Georgia, Georgetown University and the University of Tennessee. In addition to practicing medicine in England, Dr. Gibbs has done research work at the National Institute for Medical Research of Great Britain; has lectured on pharmacology at Johns Hopkins Medical School and at one time was travelling research fellow of the Rockefeller Institute at the Pharmakologisches Institut at Vienna.

Borden Buys Straub Pharmaceuticals

Acquisition of the pharmaceutical division of W. F. Straub & Co., Chicago, has been announced by Theodore G. Montague, president of the Borden Co.

Manufacturers of pharmaceutical and biological products for the past twenty-five years, the new acquisition will be operated as Straub Laboratories, and will be under the executive direction of Borden vice-president, C. F. Kieser. Key personnel will be retained but supervision will be under two executives of Borden's pharmaceutical and chemical division—William H. Berg, the director, who will supervise sales, and Harry McNeilly, director of production and research who will head up these activities in the Straub unit.

The sale does not affect the food and soap specialties business of W. E. Straub & Co.

John L. Smith Elected Pfizer President

At a meeting of the board of directors of Chas. Pfizer & Co., Inc., new officers for the following year were elected as follows: chairman of the board, George A. Anderson; president, John L. Smith; vice-president, John E. McKeen; vice-president, Albert A. Teeter; vice-president and secretary, Elmer C. Otto; and treasurer, Louis M. Timblin.

William R. Warner Officials

Ralph W. Henderson, vice-president and general plant manager of William R. Warner & Co., Inc., has announced the following reorganization of the firm's production division: Technical director, Dr. Robert T. Conner; director of pilot and developmental laboratories, Dr. Haldane Gee; chief chemist, New York, A. F. Flohr, Jr.; manager, chemical control laboratories, F. J. Austin; manager, biological control laboratories, Heber Baldwin; chief chemist, St. Louis, H. A. Vogler; purchasing agents, William R. Warner & Co., Inc., H. L. Reed (New York) and H. M. Eaton (St. Louis); purchasing agent, Richard Hudnut, G. sands; plant managers, B. Salkover (New York), R. S. Reamer (St. Louis), E. Kastning (Mamaroneck); manager of experimental laboratories (Mamaroneck), Dr. C. F. Lisher; superintendent of pharmaceutical division, William R. Warner & Co., Inc., L. M. Rogers: department heads: F. C. Kendall (manufacturing), C. Costa (filling and finishing), J. Lebron (finished material storage), R. Scaffa (shipping), C. Spannello ('Sterisol' manufacturing), M. Voetter ("Anusol" suppositories and Schering & Glatz, Inc. specialties), Miss F. E. Werner (production planning).

Production superintendent, Richard Hudnut, W. A. Black; department heads: J. Cavallo (manufacturing), E. Schneider (filling and finishing), A. Brendll (finishing materials storage), J. Breitkopf (shipping), Dr. W. Mende (experimental research), J. Kemp (production planning); manager of plant engineering, B. P. Scholz; bottle department, J. Brownstone; sample mailing department, G. Briggs; St. Louis department heads: E. Craig (manufacturing), A. Endress (production planning), G. Knopf (filling and finishing), L. R. Carter (printing), R. Buchholtz (pill and tablet manufacturing), H. E. Lundbeck (plant engineering), W. L. Moorman (shipping).

Eisler Engineering's 25th Year

Eisler Engineering Company, Newark, N. J., celebrates its twenty-fifth anniversary in June. It was founded in 1920 by Charles Eisler who had been for several years employed by Westinghouse in the capacity of machine designer and chief engineer. It was Mr. Eisler's belief that radio tubes and lamps of dependable quality could be produced by machine and so he embarked on a series of small-scale experiments which resulted in his building a variety of automatic machines with which the mass production of radio tubes was achieved.

CHARLES EISLER

To commemorate the firm's anniversary a special catalog has been issued. It is profusely illustrated with more than 4000 machine and methods illustrations. Copies are available upon request.

Monsanto Advances Dr. Thomas

The board of directors of Monsanto Chemical Co. has announced the election of Dr. Charles Allen Thomas, director of Monsanto's Central Research Laboratories at Dayton, Ohio, as a vice-president of the company and at the same time announced that, effective September 1, 1945, he will become a member of the company's executive committee. Since 1942, Dr. Thomas has been a member of Monsanto's board of directors.

He will move to St. Louis and assume his new duties as vice-president immediately, being succeeded at Dayton as central research director by Dr. Carroll A. Hochwalt, formerly associate director.

With Dr. Hochwalt, he founded the Thomas and Hochwalt Laboratories at Dayton in 1926. The organization specialized in consulting research until its acquisition by Monsanto in 1936.

Pneumatic Scale Appoints Ross V.P.

Pneumatic Scale Corp., Ltd., North Quincy, Mass., has announced the appointment of N. Stanley Ross as vice-president and divisional sales manager. Mr. Ross is in charge of the company's branch office at 360 North Michigan Ave., Chicago.

A Son to the Konwisers

Walter S. Konwiser, production manager and chemist of C. F. Kirk Co., New York, has announced the birth of his first son, Paul. Mr. Konwiser has been in the manufacturing ampoule field since 1934. A. Lincoln Konwiser is the baby's grandfather.

Consumers Import to Empire State

Consumers Import Co., Inc., importer of vitamin products, essential oils, crude drugs and raw materials, has moved its office to the Empire State Building, New York.

RALPH W. HENDERSON

DR. ROBERT T. CONNER

DR. HALDANE GEE

Measured purity goes on an errand of mercy

It's measured purity you see there on the dock beside the famous liner —

Measured purity being unloaded in a distant war theater—

Measured purity on an errand of mercy to help restore health, heal wounds and save lives —

Every day thousands of tons of the finest medicinal products, drugs, vitamins, serums, medical supplies, move from the pharmaceutical houses of America to the docks and thence across the seas.

Among these products are countless new ones—developed in wartime through the indefatigable research work of leading pharmaceutical houses — developed to help our men live and fight again.

Many of these products *started with a fine chemical, or several fine chemicals, of exacting purity.* And the efficacy of the fine chemical often assured the quality and the *success* of the product.

At Baker it is always *measured purity* in fine chemicals—measured to exacting standards.

For more than 40 years Baker has built its chemical business on measured purity. That is why leading pharmaceutical and drug companies choose Baker as a source of supply. They know that Baker's purity by the ton in fine chemicals is the result of unique control methods and ceaseless testing.

J. T. Baker Chemical Co., *Executive Offices and Plant:* Phillipsburg, N.J. *Branch Offices:* New York, Philadelphia and Chicago.

Baker's

FINE CHEMICALS

ATTRACTIVE

Eye-appeal means

attractive in any setting . . . Hazel-Atlas Opal Jars are designed for packing efficiency and eye-appeal. They do a job for you on drug store shelves or lovely dressing tables.

HAZEL-ATLAS GLASS CO., Wheeling, W. Va.

Grove Names Goldsmith and Wagner V. P.'s

Harry B. Goldsmith, Jr. and W. H. Wagner have been elected vice-presidents of Grove Laboratories, Inc., St. Louis. They will act as assistants to Harry B. Goldsmith, Sr., president, collaborating with him on sales and advertising policy.

Whittaker with Mary Dunhill

Arthur Mainzer, president of Mary Dunhill, Inc., has announced the appointment of Harris Whittaker as his assistant. For many years, Mr. Whittaker was associated with Bourjois, Inc., and was recently with Elizabeth Arden.

Stearns Manila Representative Saved

Anthony Alsobrook, Manila representative of Frederick Stearns & Co. Division of Sterling Drug Inc., Detroit, since 1931, has returned to the United States after spending three years and two months in Japanese prison camps in the Philippines. After a rest of several months at his home in Chattanooga Mr. Alsobrook will continue in export work for Sterling.

Liberated from Los Banos prison on Luzon by U. S. paratroopers on February 23, he escaped death by execution by two minutes. Confiscation of prison records by the Americans who arrived at 6.58 A.M., revealed Mr. Alsobrook's name among those scheduled for execution at 7 A.M. that morning as a means of showing authority and intimidating the other 2,125 prisoners in the camp.

Dr. Taylor Retires from Parke, Davis

Dr. Frank O. Taylor, associated with Parke, Davis & Co. for forty-three years, has retired. He served as the company's chief chemist for twenty-one years and will continue as a technical consultant.

W. P. Cusick will succeed Dr. Taylor as director of control. He will be assisted by F. E. Wilson.

Dr. Taylor will continue as a member of the contact committee which meets frequently with the Food and Drug Administration.

Dr. Bjorksten Founds Research Business

Dr. Johan Bjorksten has announced that he has resigned as chemical director of the Quaker Chemical Products Corp., Conshohocken, Pa., to establish an independent industrial research organization. Dr. Bjorksten, who is also a Registered Patent Agent, has established offices at 185 North Wabash Ave., Chicago 1.

Chilson Opens Additional Offices

Research offices were opened May 1 in the Harwood Building, Scarsdale, N. Y., by Francis Chilson industrial consultant. Mr. Chilson's main offices remain at 101 West 31 St., New York, with field offices in Pittsburgh and Chattanooga.

Mr. Chilson who is production editor of THE DRUG AND COSMETIC INDUSTRY, specializes in the consumer packaging industries.

Norman F. Dahl, president of Prince Matchabelli Inc., accepts the Charles S. Welch Memorial Award for packaging in 1944 from Eileen Welch as Herman Brooks, president of the Toilet Goods Association looks on.

Wyeth Advances Cash and Sempowski

J. D. Cash, sales manager of the biological division, Wyeth, Inc., Philadelphia, has been appointed assistant

J. D. CASH

sales director by Stuart V. Smith, director of sales.

H. Z. Sempowski, who joined Wyeth Inc. early in 1945, has been named sales

H. Z. SEMPOWSKI

manager of the biological division, succeeding Mr. Cash. Before joining Wyeth, Mr. Sempowski was with Lederle Laboratories in Detroit as district sales manager.

Webers Celebrate 50th Anniversary

Mr. and Mrs. Ferdinand Weber celebrated their fiftieth wedding anniversary April 17 with a party for their friends at the Towers Hotel, Brooklyn. Mr. Weber, who is vice-president and treasurer of George Lueders & Co., New York, celebrated his fiftieth anniversary with the Lueders Company October 3, 1942.

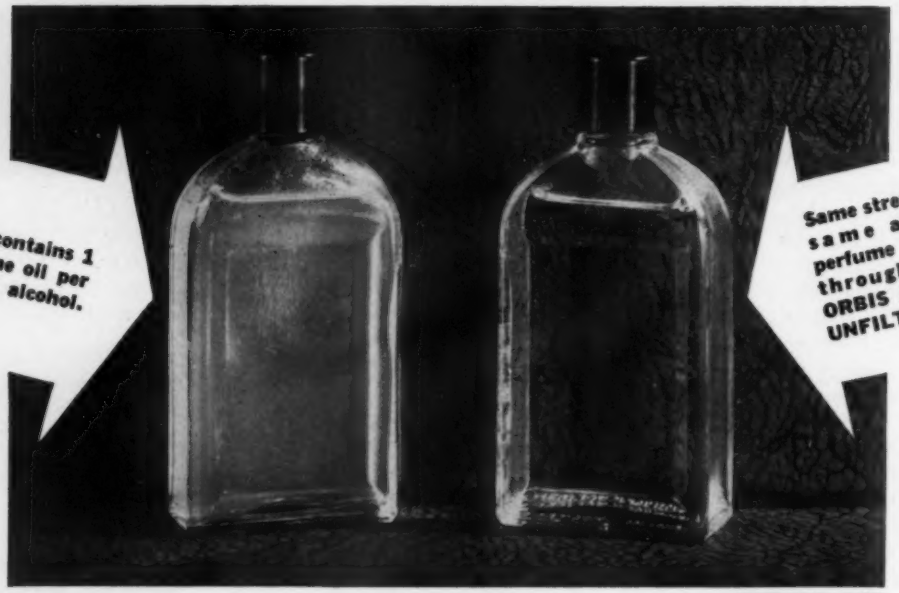
McKelvy Becomes Seaforth Chairman

Alfred D. McKelvy has been named chairman of the board of directors of the Alfred D. McKelvy Co., makers of Seaforth toiletries, Vick Chemical Co. subsidiary. Mr. McKelvy was formerly president of the company which he founded in 1939 and merged with Vick in 1941.

More Manufacturers of

COLOGNES, TOILET WATERS, AFTER-SHAVE LOTIONS and TONICS are Adopting

ORBIS ALCOH-SOLS


This bottle contains 1 ounce perfume oil per gallon of 25% alcohol.
Same strength alcohol, same amount of perfume introduced through medium of ORBIS ALCOH-SOL. UNFILTERED.

UNRETOUCHED PHOTO

BECAUSE—Alcoh-sols are perfume oils that are especially compounded to render them soluble in low proof alcohol—20 to 30%.

BECAUSE — Use of low proof alcohol stretches your limited supply of this valuable strategic material.

BECAUSE — Alcoh-sols dissolve clearly and thereby save troublesome filtration. Important because time-saving.

BECAUSE — They work equally well in specially denatured or isopropyl alcohol. Excellent coverage is imparted to the latter.

A request will bring full information about these and other odors in our full line of Orbis Alcoh-sols. They are proving acceptable to others — they will to you.

Copy of latest catalog on request

ORBIS

PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK · FACTORY & LABORATORY, NEWARK, N.J.

CHICAGO 660 North Dearborn St. · PHILADELPHIA 610 Brown Bldg. · MEXICO, D.F. Apartado Postal 8919 · BOSTON 89 Broad Street · LOS ANGELES 1807 E. Olympic Blvd. · MEMPHIS, TENN. 1620 Carr Ave.

Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
Thymol	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss

Dr. Hiebert Named Sterling V.P.

Eelction of Dr. J. Mark Hiebert as vice-president of Sterling Drug Inc., in charge of the Frederick Stearns & Co. Division, has been announced. A member of the Sterling organization since 1934, Dr. Hiebert is advanced from the position of divisional vice-president and general manager of the Stearns division, to which he was appointed when Stearns was acquired a year ago.

De Saxe Joins Associated Products

J. R. "Jerry" De Saxe has resigned as vice-president of American Druggists Syndicate to become director of drug division of Associated Products, Inc., 200 East Illinois St., Chicago, as of June 1, 1945.

Gerald Smith Joins Amer. Home

Gerald L. Smith has resigned from Gelatin Products Co., Detroit, to become associated with American Home Products Corp.

Dana Perfumes Sales Organization

Waldo V. Lossow, director of sales for Dana Perfumes, Inc., has announced the completion of his sales organization.

M. H. Russell is in charge of the midwest territory, including Chicago and Illinois, Michigan, Ohio and Indiana; Gene Mullica's territory includes California, Nevada and Arizona and Tom Nolan directs sales in New York City.

WALDO V. LOSSOW

Donald L. Hopcraft is in charge of the territory comprising Minnesota, Wisconsin, Missouri, Iowa and Colorado; Fred C. Smith covers Pennsylvania, Maryland, West Virginia and Washington, D. C.; and John VanLeer has New England. Dan F. Regal covers the southeastern territory with headquarters in Atlanta, and Gordon Yates the southwest with headquarters in Dallas.

Lt. Romani Returns from Europe

Lieut. Louis Romani, employee of Aromatic Products, Inc., New York, has returned from Europe after an absence of three years. He entered the army in October 1941 and after basic training was assigned to a tank destroyer unit. Early in 1942 he was sent to North Ireland for further training for the invasion of North Africa.

Lieut. Romani has several "firsts" to his credit He was in the first wave to land in North Africa; among the first troops in Tunisia; with the first American tank destroyers in combat; and the first enlisted man in his outfit to be commissioned on the field of battle. He was promoted to second lieutenant and given the Silver Star for gallantry in an action just outside of Tunis in which he destroyed four German tanks and damaged two others.

LIEUT. LOUIS ROMANI

After the African campaign he was sent to Italy and was in the battle of Cassino until January 1944 when he was sent to the Anzio Beachhead. There, he was wounded twice for which he received the Purple Heart with Oak Leaf Cluster. For heroic achievement at the Anzio Beachhead his platoon was cited by General Clark in the presence of the King of England.

Lieut. Romani was in every major engagement in Italy until he was returned to the United States on rotation. He is now a First Lieutenant and expects reassignment in the United States.

Merck WAC Ad Wins Award

An advertisement in behalf of the Women's Army Corps (WAC) recruitment campaign, which was published by Merck & Co., Inc. in several trade and professional journals, was selected by the Jury of Wartime Advertising Awards as one of the hundred outstanding wartime advertisements of 1944.

Deahl Named Cheplin V.P.

Neulon Deahl has been elected a vice-president of Cheplin Laboratories, Inc., Syracuse. Mr. Deahl is a native of Illinois and a graduate of the University of Illinois with a B.S. in chemistry. He was for a number of years associated with a leading pharmaceutical house in

NEULON DEAHL

the middle west as analytical chemist and later, as director of the analytical laboratory. He went to Cheplin early in 1944 as director of control.

Anderson Joins Rene Forster

A. F. Anderson joined the Rene Forster Co., New York, May 1. Mr. Anderson was formerly with the Naugatuck Aromatics division of the U. S. Rubber Co., New York.

Finkensieper Returns to Peek & Velsor

Peek & Velsor, Inc., New York, has announced that William S. Finkensieper has returned to the company after serving in the U. S. Navy. He has been appointed technical director of the company.

Baker Adds to Research Staff

The organic research staff of J. T. Baker Chemical Co. which is under the direction of Dr. Joseph R. Stevens, has been enlarged by the following appointments. John Burton, B.S., Rhode Island State College, for the past six years with Heyden Chemical Co. becomes design chemical engineer. Augustus Buzas, B.S., Rutgers University, for the past five years with Merck & Co., Inc., becomes development engineer; and Dr. Ralph Moore, Ph.D., McGill University, for the past seven years with Arthur D. Little, Inc., as research organic chemist, becomes a research chemist.

In addition, Dr. Stevens has appointed Jeanne Ossent, M.A., Barnard College, as technical librarian. Miss Ossent was previously in the employ of Rohm and Haas.

Major Guthmann Returns to Edwal

Concluding three and a half years in the technical division of the Chemical Warfare Service, Major W. S. Guthmann has resumed his former position as vice-president and treasurer of the Edwal Laboratories, Chicago.

MAJ. W. S. GUTHMANN

Major Guthmann spent a year and a half in Washington and at Edgewood Arsenal. The remainder of his time in the army was spent at Dugway Proving Grounds, Tooele, Utah.

French Mission

Raymond Barbas, president of Jean Patou, and Jean Jacques Guerlain of the Guerlain Perfumery Corp., are members of a French mission of investigation being sent to the United States, and headed by Lucien Lelong. The mission will neither buy nor sell, but will investigate conditions created by the war and the years of interruption in Franco-American relations.

Foreign Representatives to Visit Huisking

Charles L. Huisking & Co., New York, has received word from several representatives of foreign drug and chemical companies that they are planning visits to this country within the near future. Among those expected is Pierre Teisseire, managing director, Institute Pasteur de Lisboa, Lisbon, Portugal. The company deals in drugs and medicinal preparations.

J. A. Adamson, manager of Booker's Drug Stores, Georgetown, Demerera, British Guiana, is also expected. His company suffered a severe loss from fire a few weeks ago and a complete restocking has been made necessary. G. E. Maddison, managing director, Elliotts & Australian Drug, Pty., Ltd., Sydney, was due to arrive early in May.

These foreign representatives may all be reached in care of Chas. L. Huisking Co., 155 Varick St., New York 13.

Col. Patch Retires from Army

Lieut. Col. Ralph R. Patch retired from active service in the U. S. Army April 20. He joined the reserve with the rank of Lieutenant Colonel in May 1923 and was called to active service December 13, 1942. Since that time he has served as an executive in the Supply Service of the Surgeon General's Office at Washington. An eye affliction which developed while on active duty and for which he has been receiving treatment at Walter Reed Hospital, was responsible for his retirement. It will now be necessary for him to limit his business and personal activities for an indefinite period but it is hoped that by doing so he will be able to save his sight.

When he went to Washington in 1941 he gave up all connection with the E. L. Patch Co., of which he is president. Colonel Patch has now returned to his home in Stoneham, Mass.

HOWARD V. PHILLIPS

Col. Phillips Returns to McKesson

Lieut. Col. Howard V. Phillips, recently placed on inactive service after three years in personnel work for the United States Army Air Forces, has been appointed to the newly created post of merchandising manager of the manufacturing division of McKesson & Robbins, Inc. Col. Phillips will make his headquarters at the McKesson laboratories in Bridgeport, Conn.

Stokes Appoints Redmond in Detroit

Thomas Redmond has been appointed Detroit sales representative for the F. J. Stokes Machine Co., Philadelphia. His address is 920 Balfour Road, Grosse Pointe Park. For a number of years Mr. Redmond has handled Stokes plastic molding equipment and his responsibilities now include the entire Stokes line of high vacuum pumps, gauges, processing equipment, tablet compressing machines for the pharmaceutical, chemical, food, ceramic, powder metallurgy and plastic fields.

Kerrigan and Johnstone Merck Directors

James J. Kerrigan and Henry W. Johnstone, both vice-presidents of Merck & Co., Inc., have been elected to the board of directors. These elections represent additions to the board which formerly numbered nine members.

Mr. Kerrigan is in general charge of the company's commercial activities. He joined the company in 1907 and was elected vice-president in 1921.

Mr. Johnstone joined Merck & Co., Inc. in 1930 as plant manager. In 1936 he was elected vice-president and is in charge of personnel and plant operations.

Kelly Named Wm. S. Gray Secretary

Stephen P. Kelly has been appointed secretary of William S. Gray & Co., New York. He has been with the chemical company for over thirty years. F. R. Gates, in charge of the naval stores department has been appointed assistant secretary and Joseph Armour, formerly auditor, assistant treasurer.

Syntomatic Appoints Iorns in St. Louis

Syntomatic Corp., New York, importers and manufacturers of essential oils, aromatics, flavor and perfume oil specialties, has appointed the Clifford L. Iorns Co., St. Louis, to represent it in that city and adjacent territories. Victor L. Roberson is head of the Clifford L. Iorns Co.

VICTOR L. ROBERSON

Daughter to the Gamages

Mr. and Mrs. Shockley C. Gamage have announced the birth of a daughter April 6. Mr. Gamage is the foreign and domestic sales representative of Magnus, Mabee & Reynard, Inc., New York. The baby has been named Susan Service, in honor of her great grandfather, Robert Service, who was prominent in Philadelphia drug circles, and who was one of the founders of the New York State Pharmaceutical Association.

ADVERTISEMENT—*This entire page is a paid advertisement.* *Prepared Monthly by U. S. Industrial Chemicals, Inc.*

U.S.I. CHEMICAL NEWS

May ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1945

SO_2 Household Fumigant Prepared with Acetone

In spite of its many desirable qualities as an insecticidal fumigant, sulfur dioxide has always been hard to handle because it is a gas at ordinary room temperatures. Mixed with acetone, sulfur dioxide becomes a definite liquid compound, whose vapor pressure is sufficiently low to allow it to be packaged in ordinary tin containers. Furthermore, a mixture of 1 part acetone with 1.9 parts sulfur dioxide, by volume, is non-inflammable in all concentrations in air. This liquid is stable while confined, but upon exposure to air decomposes and becomes progressively volatile.

In tests, the liquid was absorbed in diatomaceous earth pellets, and a quantity of these pellets was exposed in a room containing the test insects. The compound, when evaporated into the air, was lethal to the insects, which included bedbugs, flour beetles and carpet beetles. Treatment was harmless to wallpaper, white and colored fabrics, painted surfaces and metals.

Apparently the acetone-sulfur dioxide compound holds possibilities as a commercial fumigant, and will bear further investigation.

How to Make 2 = 3

This year, Washington reports, there will be *only two* War Loan drives, not three. But the total need is no less. For the Battle of Japan has just begun — and it's going to be a lot tougher and longer than many of us expect. So — let's stretch 2 into 3 by buying *bigger extra bonds* in this, America's Big Seventh War Loan drive.

Thermal Conductivity of Normal Alcohols

Recent studies at an eastern university have determined several new figures for the thermal conductivity of normal alcohols at 30 C. They are as follows:

Alcohol	*New figures*	*Others*
Methyl	0.00050	0.000503
Ethyl	0.00041	0.000433
n-Propyl	0.000380	0.000409
n-Butyl	0.000365	0.000400
n-Amyl	0.000365	0.000388

Pharmaceutical Lactones Yielded by New Process

Structurally complicated lactones, such as the cardiac poisons of the digitalis, strophanthus and squill series, may be prepared from easily-available products by a process discovered by a Swiss scientist. Basically, the process comprises condensing saturated or unsaturated lactones which are substituted by halogen with carbonyl compound. The condensing agents suggested include metallic alcoholates such as sodium ethoxide. Ether, acetone or both also enter into each of the four processes given as examples.

New U. S. I. Liquid Insulation Has Wide Range of Uses

Product Exhibits Remarkable Ability to Protect Electrical Systems from Moisture, Wet Weather and Many Acids

A unique insulating material which has won wide acceptance as a protector of electrical systems in automotive and amphibious combat equipment has been added to the list of products of U. S. Industrial Chemicals, Inc., according to a recent announcement. While the new product, trade-named PiB Liquid Insulation, will make an ideal companion product for the company's Super-Pyro Anti-Freeze in the automotive field, the company expects extensive expansion of PiB's market in the farm, marine and industrial fields.

This motor was removed from an oil burner in a flooded cellar where it had been "drowned out". PiB was sprayed into the motor and in a matter of minutes the motor was running smoothly. To test the "staying power" of PiB, the motor was then submerged in soapy water, where it has been running, intermittently, for two years without a hitch.

Long-Lasting Protection

The new product is described as a liquid with powerful penetrating action and high resistance to the action of water, ordinary acids, oils and greases. Its viscosity is low enough so that it flows freely into hard to-get-at nooks and crannies and can be easily applied by brush or spray. Good water-repellent properties coupled with a strong "wetting" action enable PiB to undermine and displace water which may be present in the wiring system or on insulating surfaces. PiB has a dielectric strength of 4000 volts per mil; its protective qualities, under normal conditions, last for a minimum of six months.

War-Tested

Ignition systems on amphibious combat equipment are subjected to the severest kind of conditions. Salt spray and soggy climates all tend to break down insulation and cause corrosion. The most important current use of PiB is in protecting the ignition systems of American amphibious war machinery.

PiB is winning increasing popularity among operators of buses, trucks and passenger cars. It is used to waterproof ignition systems, to prevent corrosion and current losses in batteries, to re-insulate cracked and dried-out wiring. In the marine and farm fields, PiB is seen to have a particularly bright future. From yacht to modest outboard, marine equipment of every type will benefit from the protection PiB affords against starting failures and the ravages of salt air. Farm equipment that must stand up under hard usage and

(*Continued on next page*)

New British Insecticide Exhibits High Potency

Efforts of a British concern to find an easily synthesizable replacement for scarce and costly derris have resulted in the development of a new insecticide which they report to be five times as potent as D D T.

The new substance is benzene hexachloride, briefly identified as "666" because of its formula $C_6H_6Cl_6$. Tests revealed that the gamma-isomer, present in the crude material in concentrations of from 10 to 12 per cent, was more toxic to weevils than any substance that this concern had ever tested. On the other hand, the alpha- and beta-isomers are virtually non-toxic.

If laboratory results are duplicated in commercial applications, new insecticide formulas will undergo drastic revisions.

Just brush or spray PiB Liquid Insulation on the plugs, wiring, distributor, coil terminals and battery of a water-stalled engine. Step on the starter and you're ready to roll! You can literally "hose down" an engine that has been properly treated with PiB and it won't even miss.

ADVERTISEMENT—*This entire page is a paid advertisement.*

May ★ **U.S.I. CHEMICAL NEWS** ★ 1945

Patent Granted on All-Purpose Insectifuge

As previously described in Chemical News, a government-developed all-purpose insect repellent is doing a remarkable war job in protecting our fighting forces against the variety of insects they encounter on different parts of the globe. One of the vital ingredients of this repellent is U.S.I.'s Indalone.

Recently, a patent has been assigned to the United States, as represented by the Secretary of Agriculture, covering the composition of the product. The patent describes it as a ternary solution comprising by volume from 33⅓ per cent to 80 per cent of dimethyl phthalate, and complementary equal parts of 2-ethyl-1, 3 hexanediol and n-butyl mesityl oxide oxalate. (Indalone).

Bitter Soya Taste Yields to Alcohol

The bitter, beany flavor of present-day soya flour has seriously limited the use of this mineral- and protein-rich flour in bakery products. A new alcohol process for extracting the soya-bean oil, however, gives promise of overcoming this handicap. According to a recent report, the new process leaves a sweet-eating bean for grinding into a flour which can be used in greater proportions for enriching bakery products.

Urethan May Play New Bactericidal Role

Experiments with urethan and other carbamates, such as butyl and prophyl, indicate that these compounds, when combined with sulfonamides, have unexploited possibilities as bactericidals and bacteriostatics, according to a recent report.

Indications are that, in addition, urea and urethane both antagonize slightly the sulfonamide inhibitors and that they increase the solubility and bacteriostatic activity of the sulfonamides. Both are effective mainly against Gram positive bacteria and to a lesser degree against Gram negative bacteria.

Tests indicate that urethan is superior to urea in all respects.

New Liquid Insulation

(Continued from preceding page)

exposure to weather also will give longer, more reliable service.

Industrial Uses

In industry, PiB appears to have limitless possibilities. Motors which operate in damp atmospheres can be protected simply by spraying with PiB. Open switchboards, control panels, automatic signaling systems and similar electric equipment can likewise be protected with PiB. The emergency uses of PiB—in treating drowned-out motors, leaking panel boards and other moisture-affected electrical equipment—should make it a "tool" every maintenance man will want to have in his kit.

Above, you see PiB being applied to a battery. Photo below shows test to determine current leakage. New battery shows no leakage. Used battery, prior to treatment with PiB, showed sufficient leakage to cause electrolysis and consequent corrosion of battery holders, cables and terminals. Same battery *after* PiB treatment showed no measurable leakage. It is estimated that periodic treatment with PiB can add 10 per cent to the life of a battery. However, PiB's biggest contribution to battery life is made indirectly — by assuring quick starting of motors even after long idleness in damp weather.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

A new plastic material, which is claimed to transmit as much visible light as window glass, yet block all harmful ultra-violet radiation, is now on the market. **(No. 931)**

USI

A transparent new fabric is described as being as sheer as voile, but with exceptional strength and wind and water resistance. It is available for development work. Suggested uses include rain-proof garments, shower curtains, etc. **(No. 932)**

USI

Grease-proof cellophane packaging is offered in the form of a new cellophane-cloth-wax laminate, which is specially recommended for wrapping of grease-coated metal parts. **(No. 933)**

USI

A cleaner for plastic glass, such as plexiglass, is offered for sale in bulk at a new low price. It is applied by a new sprayer which is said to speed cleaning and improve results. **(No. 934)**

USI

A new chlorinated paraffin, resinous in nature, is claimed to be both flame and moisture resistant, and to be non-toxic. **(No. 935)**

USI

Corrosion proofing of metal surfaces is said to be facilitated by a new wax concentrate sold in solution with petroleum solvents. The liquid, which may be applied by brush, dipping or spray, dries in an hour, remains flexible at minus 20 F., and will stand heat up to 214 F. **(No. 936)**

USI

A new synthetic-rubber latex, reported to be a modified type of butadiene-styrene, is announced. Suggested postwar uses include impregnation of paper and fabrics used in shoes and binding of fibres and hair for upholstery. **(No. 937)**

USI

An abrasion-resistant plastic, said to be 250 times as resistant to abrasion as boiler plate, is offered. It is claimed to be useful for such tough jobs as protecting sand-blast equipment. **(No. 938)**

USI

An alternate for Carnauba wax, which is said to take its place in paste floor polishes, automobile polishes, carbon paper and water-wax emulsions, is on the market. **(No. 939)**

USI

Heat-indicating bands, used as bottle seals, are designed to give warning when the bottle has been subjected to a temperature harmful to the contents. Under these conditions, the color of the band changes permanently from green to bright orange. **(No. 940)**

USI

A new enamel-like paint, for use on concrete, brick or wood exposed to water or moisture, is offered. Maker states that new paint affords better coverage than its predecessor and is resistant to yellowing and the action of corrosive fumes. **(No. 941)**

U.S.I INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK 17, N. Y. — USI — BRANCHES IN ALL PRINCIPAL CITIES

ALCOHOLS
Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined

Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96%, Absolute
*Super Pyro Anti-freeze
*Sclox Proprietary Solvent

***ANSOLS**
Ansol M
Ansol PR

*Registered Trade Mark

ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS
*Diatol
Diethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate

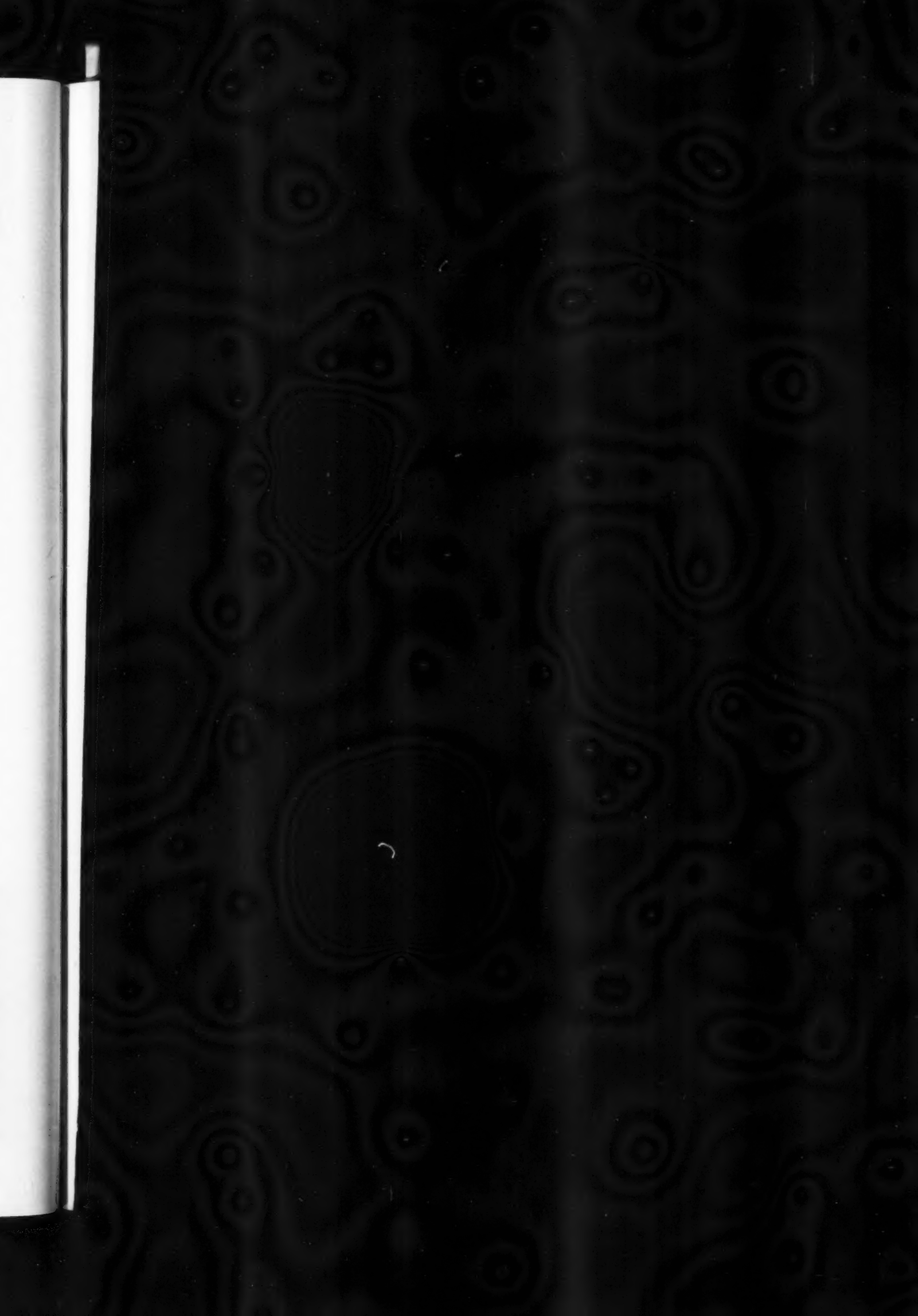
ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.

FEED CONCENTRATES
*Curbay B.G.
*Curbay Special Liquid
*Vacatone 40

ACETONE
Chemically Pure

RESINS
S&W Ester Gums—all types
S&W Congo Gums—raw, fused & esterified
S&W *Aroplaz—alkyds and allied materials
S&W *Arolene—pure phenolics
S&W *Arochem—modified types
S&W Natural Resins—all standard grades

OTHER PRODUCTS
Collodions
Ethylene
Ethylene Glycol
*Indalone
Nitrocellulose Solutions
Urethan



Stern Joins M.M.&R. 20 Year Club

Milton Stern assistant sales manager of Magnus, Mabee & Reynard, was inducted into the MM&R Twenty-Year Club at a dinner given in his honor April 12 at the Hotel Astor, New York. Eighteen persons have earned admittance to this group, twelve of whom are still active.

MILTON STERN

W. F. Fischer who joined the club in 1927 and is the oldest member in point of service, acted as toastmaster at the dinner which was attended by sixty.

H. J. HENRY

J. & J. Elects Henry V. P.

H. J. Henry, director of merchandising, has been elected a vice-president of Johnson and Johnson, New Brunswick. He joined the company in October 1935 as a director of its Tek tooth brush division. He was elected a director of the company in November, 1939, and the following February was named director of merchandising.

BIMS Plan Golf Outings

The BIMS have announced their golf dates for the 1945 season. Three outings are planned: June 28 at Baltusrol Golf Club, Short Hills, N. J.; July 26 at Sleepy Hollow Country Club, Scarborough-on-Hudson, N. Y.; and August 23 at Plandome Golf Club.

Bevernick Named Prentiss V. P.

A. W. Bevernick has been elected vice-president of R. J. Prentiss & Co., New York. He joined the Prentiss organization in 1934 and has served as western manager for the past ten years. He will continue to make his headquarters at 9 South Clinton St., Chicago.

Abbott Opens New N.Y.C. Branch

S. DeWitt Clough, president and general manager, was host when the new quarters of the New York branch of Abbott Laboratories at 209 West 14 St., New York, were open for inspection Saturday, April 28. Co-hosts with Mr. Clough were R. M. Cain, executive vice-president; R. E. Horn, vice-president and general sales manager; J. F. Stiles, Jr., vice-president and treasurer; F. H. Young, vice-president and director of production; Edward A. Ravenscroft; Charles S. Downs; Hugh C. Harris, district sales manager; E. L. Shattuck, manager of the New York branch; Frank J. Balanda, district salesmanager; Abbott medical service representatives and the staff of the New York branch.

Young Named N.Y.Q. Asst. Sec.

A. Young has been advanced to the post of assistant secretary of New York Quinine & Chemical Works, Brooklyn

---

Breen Mutual Manager in Cleveland

Fred Breen has been named manager of the Cleveland branch of the Mutual Drug Co. He was formerly with Magnus-Mabee & Reynard, Inc., New York.

Dunning Heads Chicago D. & C. Assn.

Harry E. Dunning, Albert Verley & Co., was elected president of the Chicago Drug and Chemical Association at its 45th annual meeting, March 29. Other newly elected officers are: Dale F. Ruedig, Eli Lilly & Co., vice-president; John L. Thomas, Joseph Turner & Co., secretary; and Wilson I. Doan, Dow Chemical Co., treasurer.

Directors elected to serve for a two-year term are: Edgar E. Brand, L. Sonneborn Sons, Inc.; Ed. Davis, Davis & Davis, Inc.; A. L. Starshak, Walgreen Co., and Charles R. O'Malley, Professional Journals.

Directors remaining in office are: James M. Murphey, Solvay Sales Corp.; Gerald F. Pauley, Monsanto Chemical Co.; Bruce Puffer, Kimble Glass Co.; and Talmadge B. Tribble, Magnus, Mabee & Reynard, Inc.

Benedict Norwich Director, Lewis V. P.

At the annual meeting of Norwich Pharmacal Co. Oliver W. Benedict, vice-president and general sales manager, was elected a director and Joseph T. Lewis, merchandising manager, was elected a vice-president.

OLIVER W. BENEDICT

Mr. Benedict has been with the company since 1917, was elected a vice-president in 1939 and made general sales manager January 1, 1945

JOSEPH T. LEWIS

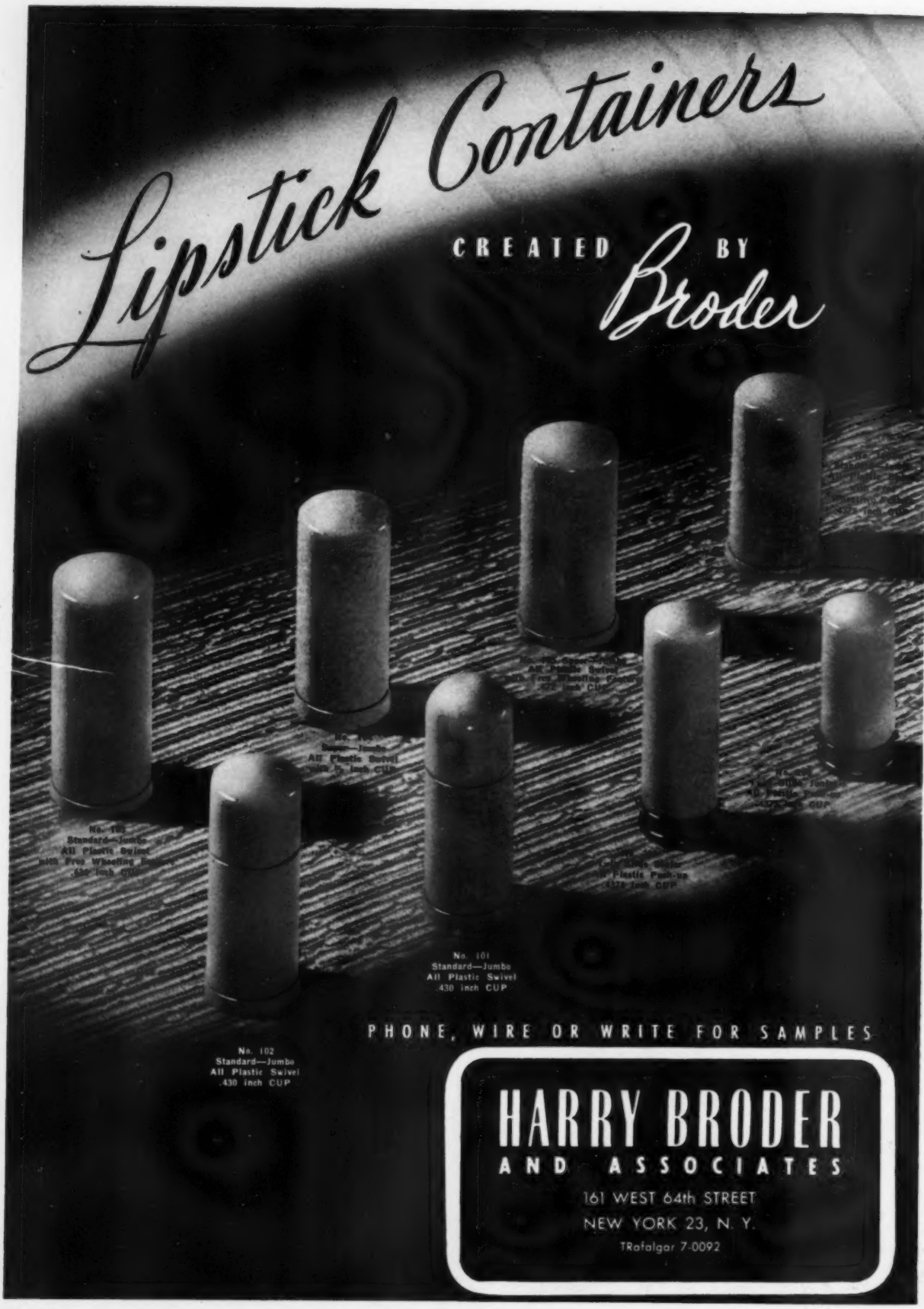
Mr. Lewis is also vice-president and managing director of Norwich Pharmacal Co. Ltd., the company's Canadian subsidiary.

Pine Representing Remus

Henry Pine is now representing Edward Remus & Co., Inc., New York, in the New York, Brooklyn and New Jersey territory.

Michigan Cosmetic Assn. Golf Dates

Geoffrey Snider, chairman of the golf committee of the Allied Drug and Cosmetic Association of Michigan has announced plans for the 1945 golf season. All games will be played at the Birmingham Country Club on the following Tuesdays: May 29, June 26, July 31, August 28, September 25, October 23.


Lipstick Containers
CREATED BY
Broder
No. 101
Standard—Jumbo
All Plastic Swivel
.430 inch CUP
No. 102
Standard—Jumbo
All Plastic Swivel
.430 inch CUP
PHONE, WIRE OR WRITE FOR SAMPLES
HARRY BRODER
AND ASSOCIATES
161 WEST 64th STREET
NEW YORK 23, N. Y.
TRafalgar 7-0092

Sterling Drug Buys Winthrop Stock

Sterling Drug Inc. purchased at public auction in Jersey City, April 23, the Class B common stock of Winthrop Chemical Co. upon its successful bid of $9,500,000, paid in cash. Simultaneously, it entered into a voting trust agreement with the Allied Property Custodian and concurred in amendment to the consent decree now in force, as a guarantee that the control of Winthrop Chemical Co. would remain with interests friendly to the United States.

Consisting of 6,150 shares and representing a 50 per cent interest in Winthrop, the Class B stock was sold by General Aniline & Film Corp. upon the authorization of the Alien Property Custodian. Sterling's purchase of that stock now brings it in full ownership, of Winthrop, since it has always owned the Class A common stock, representing the other 50 per cent of its shares.

Coneybear Appointed by Evans

Dr. Ralph L. Evans, president of Evans Chemetics, Inc., New York, has announced the appointment of S. F.

S. F. CONEYBEAR

Coneybear as development manager of the company. He will have charge of product development and promotion in the chemical and specialty fields.

Twin Girls to the Voorhee's

Kenneth Voorhees, executive vice-president of Ungerer & Co., and Mrs. Voorhees have announced the birth of twin daughters, Patricia and Beverly, on April 12. They also have a daughter, Adele, 11, and a son, Kenneth, 6.

Wyeth Exhibits Oil Paintings

Wyeth Inc., Philadelphia sponsored an exhibition of oil paintings "Pioneers of American Medicine" by Dean Cornwell, N.A., at the Enoch Pratt Library in Baltimore from April 23 to May 12.

Fassnacht Joins Jacques Wolf

Frank L. Fassnacht has become associated with Jacques Wolf & Co., Passaic, N. J. He will make his headquarters in Boston and will call on the trade in Massachusetts, Vermont, New Hampshire and Maine.

Perry Goes to Chicago for Aromatic Prod.

Herbert E. Perry has been appointed to a sales position in the Chicago territory of Aromatic Products, Inc., under the general direction of S. J. Vance.

HERBERT E. PERRY

Mr. Perry has been connected with Aromatic Products, Inc. as a perfumer and has had extensive training in all departments of the aromatic chemical business.

Grece Named Winthrop Ass't. Sec.

John M. Grece, for the past fifteen years manager of the sales promotion department, has been elected assistant secretary of the Winthrop Chemical Co., Inc., New York and Rensselaer, N. Y.

Mr. Grece became associated with Winthrop in 1927 when the H. A. Metz Laboratories were merged with the company. Three years later he was appointed manager of the sales promotion department which position he will continue to hold.

Sidney C. Mills, manager of the Chicago professional service office, has been promoted to regional manager of the mid-west professional service offices, after nine years with Winthrop and Arthur W. Jensen, with the company since 1934, has been appointed regional manager of the eastern professional service offices. Reginald C. Bowman has been made manager of the San Francisco professional service office. Mr. Bowman joined Winthrop in 1935. C. C. Wood recently medically discharged from the Navy is returning as assistant manager and research liaison in the San Francisco office.

Ravel Perfumes Organized

A new company, Ravel Perfumes, Inc., has been organized for the manufacture of perfumes, toilet waters and colognes. Offices have been established at 600 Madison Ave., New York 22. E. Barrios is president.

Captain Charles J. Eusey

Merritt V. Eusey, Pasadena, Calif., assistant to the president of Florasynth Laboratories, Inc., has received an official announcement from General Vandergrift, commanding officer of the U. S. Marine Corps in the South Pacific, of the death of his son Captain Charles J. (Jack) Eusey, in action on Iwo Jima.

Dr. Martin Ittner

Dr. Martin Hill Ittner, chief chemist for Colgate-Palmolive-Peet Co., Jersey City, died April 22 at Spring Lake Heights Hospital after an illness of six months. He was seventy-four.

He was born in Berlin Heights, Ohio, and received a B.Ph. in 1892 and a B.Sc. in 1894 from Washington University. He then went to Harvard where he received his M.A. in 1895 and a Ph.D. in 1896. For a few months he served as a private assistant to Dr. Wolcott Gibbs at Newport, R. I., and then joined the Colgate Co. as chief chemist in 1896. He retained that position when the company became Colgate-Palmolive-Peet Co. in 1928.

In 1940 the National Association of Manufacturers conferred upon Dr. Ittner the honorary title of "modern pioneer" and two years later he received the Perkin Medal from the Society of Chemical Industry for outstanding work in the field of chemistry.

Robert M. Sanford

Robert M. Sanford, manufacturing superintendent of Monsanto Chemical Co.'s plant at Monsanto, Ill., died April 24 in Barnes Hospital, St. Louis, after a short illness. He was fifty-six years old.

He joined Monsanto as a control chemist at the Monsanto, Ill., plant in 1917. In 1919 he became supervisor of the glycerophosphate department at the St. Louis plant and served as supervisor of the same department from 1921 to 1932 when he returned to the Illinois plant as operating superintendent of phenol departments. He was made manufacturing superintendent of organic departments in 1941.

Try "SLUGGING" OR PRECOMPRESSING

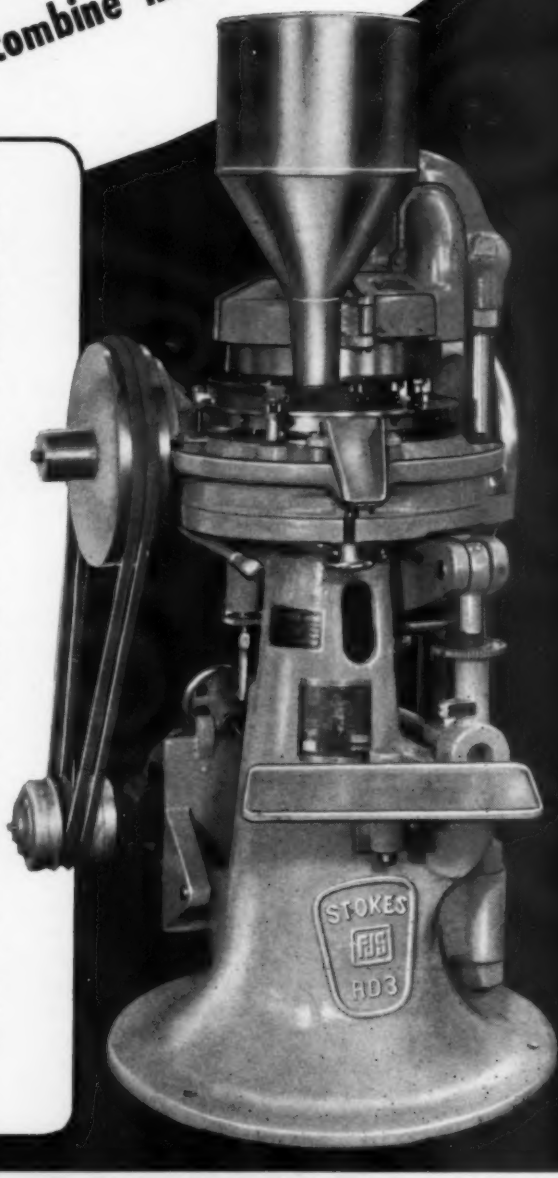
to combine incompatible materials

Your Stokes D-3 Rotary Tablet Machines are ideal equipment for preparing granulations by the "slugging" method . . . often the best, in many cases the only satisfactory method, because it eliminates wet mixing and drying, simplifies the problem of combining incompatible materials and is successfully used in handling heat- and moisture-sensitive and other troublesome formulas.

Your D-3 machines were developed especially for handling fine powders, are heavy and rugged, have a variable speed drive that makes quickly available the most efficient operating speeds for making both "slugs" and finished tablets. They are equipped with our patented Excess Pressure Release to prevent possible damage in precompressing operations.

For further information on precompressing methods or other help on tabletting or preparation of materials or care of machines, write us. Ask for booklet "Tips", to help prolong the life of punches and dies and tablet machines.

F. J. STOKES MACHINE COMPANY
5932 Tabor Road Olney P. O. Phila. 20, Pa.



F.J.Stokes TABLET MACHINES PHARMACEUTICAL EQUIPMENT FJS Est 1895

Production Forum

By Francis Chilson

Industrial Consultant

Post-War Cosmetic Plants

There was a time in my experience in the cosmetic industry, when manufacturers of cosmetics were interested neither in machinery nor in lower operating costs. As a matter of fact, the president of one of the large cosmetic companies once told me during the early years of my practice, that he didn't give a damn about operating costs—they were too small a part of the total operating costs of his business to worry about. That was before the depression began to bite deeply. The gentleman in question is no longer president of his company, nor is he even a prominent figure in the industry at this time. I have often wondered if his decline was in any way the result of his attitude toward operating costs.

However, before discussing operating costs and the relation of machinery to these costs, I should like to digress a moment to discuss the types of factory building in which such machinery is housed. I can say to you emphatically, that your operating costs are determined more by the type of building you utilize, than by the particular kind of machinery you use. Indeed, you can not utilize the best machinery to full advantage unless your factory buildings are properly designed. For many years, and indeed right up to the present moment, manufacturers thought of buildings in terms of space only. Buildings were rented, built or added to when more space was needed. Very few manufacturers in our industry have thought of their factory buildings as being composite machines of which all process and packaging machines are but the component parts. Your operating costs consist very largely of the cost of handling materials;—actual conversion costs are relatively minor. For many years, I have been preaching this in speech and in writing. I intend to go on preaching it because I am not sure that this simple axiom is generally understood. In spite of all I've written on the subject; in spite of all I've said about it in public and in private, the idea that a building is the controlling influence in operating costs seems too simple to be understood clearly. Not long ago, I had a discussion with a prominent cosmetic manufacturer about a new building project. I was not consulted professionally; I was aksed, as a personal friend, to look at a model. The model was beautiful. It portrayed a 4-story building which was laid out in detail and in perfect symmetry to the last square inch and—it was completely wrong. I didn't tell him it was, because I get paid for telling people that; besides I knew that the gentleman in question was less interested in building a factory than in building a monument, so there was little point in getting into an argument with him.

Now, if a manufacturer desires a monument, then he is wasting time in listening to me. If he desires, on the other hand, to keep his operating costs at a minimum, then it will be easy to show the influence of his building type on controlling costs. I have always been cost conscious; I was brought up that way. To me, high cost is a form of waste and waste is criminal. Waste and inefficiency are synonymous terms. In the post-war economy, there will be room for neither.

Cost of Handling Materials

As long as you are in the cosmetic business, the cost of handling materials will constitute the major part of your operating cost—raw and packaging materials, of course, excluded. The greater the variety of your line, the greater will be your need for warehousing space for materials and the more difficult will be the problem of handling materials from one point to another. In the cosmetic business, you will always be under the necessity of handling a great variety of packaging and raw materials. This business is subject to fads and fancies. A line of items is maintained and amplified from time to time as fashion or competition dictates. At the same time, however, lines which lose their pristine popularity, do not die altogether. They may hang on in sufficient volume to justify their continuance for 15 or 20 years, so therefore, the more items you have, the more complex are your material storage and handling problems. To visualize the handling of materials, you have only to analyze a package into its component parts. You have a container of some sort. Separately, you have a closure; you have front and back labels and

YOU will have a TWO-FRONT WAR to fight

when Peace comes

Prepare for it now

Today, manufacturers have to contend with merely *one* front—the *production front.* But when the shooting stops, there'll be still another front that will call for aggressive planning—the *selling* front.

In this two-front war of the brands, packaging will play a major role. That's why so many executives are now laying plans for package improvement. Orders for new equipment now on our books show how widespread this movement is, for these orders come from companies in practically every field where packaging is used.

More than 30 years of service to the package goods industry finds us today with a line of modern machines that meet every wrapping requirement, and make striking new improvements in packaging possible. Operating at high speed, and at low cost, these machines turn out the kind of smart looking, perfectly wrapped packages that set the pace in competitive selling.

If you are ready to discuss your postwar packaging, why not get the benefit of our broad experience? Write or phone our nearest office.

ARMY E NAVY

PACKAGE MACHINERY COMPANY • Springfield 7, Massachusetts

30 Church St., New York 7 • 111 W. Washington St., Chicago 2

101 W. Prospect Ave., Cleveland 15 • 443 S. San Pedro St., Los Angeles 13 • 32 Front St., W., Toronto 1

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

possibly neck labels; you may also have viscose caps, cartons, corrugated, tissue or other trimmings. Each specific category of packaging materials represents a separate item which must be separately handled as it is received, and separately stored in your packaging warehouse to be available for future use; it must separately be withdrawn from the packaging material warehouse and by some means taken to the assembly or packaging department; and again separately by hand or by mechanical means, these component packaging elements are put together to form the finished package Shipping cases of finished packages occupy infinitely less space than the several individual component parts of which the case is comprised. As a matter of fact, a case of finished goods occupies no more cubic space in the finished stock department than is occupied in the warehouse by the original case of empty containers.

Hence, the problem of handling packaging materials is varied and laborious. Materials are received from a freight car or a truck. They are unloaded by hand; they are transported by hand or mechanical means to a point in your warehouse and are placed into storage. At the appropriate time, the several materials comprising the package of a particular product are withdrawn from the warehouse area or areas and are taken to the packaging department for assembly. The packages pass through a series of hand and mechanical manipulations until they are completed. After that they are conveyed into the finished stock warehouse. But the handling does not end here. The packages are individually or by case lots, withdrawn to fill customers orders and again they are handled through a series of hand operations, until they are loaded on trucks for final delivery.

Importance of Building Design

If your building, therefore, is properly designed, it will facilitate the handling of materials of all sorts. It will facilitate the manufacture and assembly of your product into finished, completed packages. It will facilitate the efficient utilization of your equipment and your personnel. In other words, if your basic machine is the right machine and it has been properly designed, your production costs can be kept at a minimum. If, on the other hand, your fundamental machine, that is to say, your factory building is improperly designed, you can not overcome its deficiencies entirely even by the use of the most modern automatic equipment or the most modern material handling systems. I was recently called upon to design a new cosmetic plant for a manufacturer who also operates an old four-story plant. The new plant was built just before the war, according to principles which insure easy, rapid handling of materials. The new plant is quite ornamental. The overhead of a large and elaborate plant site is borne by the new plant. The packaging and manufacturing equipment in the new plant is, in the main, identical with that in the old, yet the unit cost of products made in the new plant is on an average 15% lower than in the old. The essential difference between the two plants, consists mainly in the design of the buildings. One factory facilitates the handling and storage of material, and the other is just a building.

In discussing material handling, a tremendous number of fallacies are accepted without critical examination. Unless you have had wide experience with all types of buildings and with all types of equipment, it is difficult not to accept common fallacies. Gravity flow is one of the biggest fallacies that ever struck American industry. What comes down must go up and in general, after you've brought materials up to a high level of several stories, they must pass through a series of processes which in any case require the use of transfer equipment of some type. Not long ago, I saw powder packaging operation in which four floors were utilized. Materials were taken to the fourth floor, lifted into mixers; the mixers in turn discharged into mills; the mills in turn discharged into sifters and the sifters into filling machines. It looked very nice. The several tons of material that were taken up in the elevator came down through the equipment. The hitch was that when anything went wrong, everything before and after the machine that went wrong was tied up and since supervision was required on each of the four floors, the cost of supervision for a simple process was multiplied. In this particular instance, by breaking the gravity flow at a couple of points and setting up detention hoppers it was possible to increase production by more than 100%.

Place of Conveyors

Another great fallacy about handling materials is that conveyor systems are the final answer to the problem of handling materials. Conveyors seem an essential part of the American theory of mass production Yet, on intermittent flow of materials, conveyors are the most expensive way of handling materials imaginable. Because conveyors have worked so efficiently in the automobile industry, manufacturers in other industries have assumed that they will work equally well in theirs. Conveyors, however, by their very nature are intended for the continuous movement of material from point of origin to point of destination. If, as in the cosmetic industry, the flow of incoming material is intermittent and you are therefore, obliged to stack materials, conveyors not only are expensive to install in such a case, but they actually may increase the cost of handling materials. There are certain circumstances where some conveyors are indispensable. Occasionally it happens that a group of buildings will be scattered about a plant site in such a way that it is impossible to service them by elevators, in which case the use of conveyors actually will facilitate the handling of materials. Also, in some multi-story buildings, conveyors and chutes can be used to advantage.

I believe I have said enough now to convince you that a multi-story building, by which I mean a manufacturing building over two stories, is a monstrous abortion

as a production machine. It is perfectly alright to have a four-story building, provided you are using the top floor for offices and the third floor for laboratories and you confine your manufacturing and packaging to the first and second floors. But this type of building is by no means ideal. It is simply a second guess. Packaging materials, packaging operations, finished stock and shipping, should all be on one continuous and contiguous level. Whether manufacturing is also placed on this level or placed on a second floor depends upon particular circumstances. If the material to be packaged is a heavy tonnage item such as face powder, a single story operation as indicated. If the product contains a comparatively small amount of raw material in relation to water, as is the case with a great many lotions and emulsions, then a second story for manufacture and raw material storage may be utilized.

However, not all of you will have the opportunity in the post-war period of constructing a new plant, because the substantial investment you have in existing plant, whether right or wrong, precludes its abandonment, but you can re-arrange your facilities in such a way that almost ideal operation can be secured. An ideal building is designed not merely to house materials, equipment and personnel, but to insure the smooth, uninterrupted flow of materials through the plant in such a way that equipment and personnel are utilized with maximum efficiency.

Post-War Equipment

This brings me to the question of equipment in the post-war period. It would be unwise to look for radically new developments in the immediate future. Equipment manufacturers have not had the time to develop new equipment, but their war experience has filled them with ideas which will be poured up on the drawing boards as soon as possible after the close of the war. At the beginning, and probably for a two year period, manufacturers will be busy reducing their back logs of standard equipment orders which have been piling up during the war period. It behooves all of you, therefore, who are contemplating a modernizing, expansion or construction program, to place orders as soon as possible for post-war delivery. Packaging machinery people have had a great variety of experience during the war in handling materials which heretofore they would not have considered as automatic possibilities, such as cartridge cases and bullets. There was a time not long ago, when a certain capping machine manufacturer thought that a long skirted cap would not be handled automatically. They all know how to do it now. Also they would tell you that a large diameter cream top cap likewise could not be handled; they can do that also.

I anticipate after the war, that there will be a radical increase in the use of printed glassware and that in time, label printing machines will take their place in production lines, instead of the conventional type of paper labeling machines. Filling machines will be applicable to a wider range of products and will be very much simpler in design. Powder filling, which heretofore, has always been a dusty operation, will be handled without dust and with increased accuracy. There is every reason to believe that the traditional hand operations such as molding lipsticks, will be mechanized. Throughout the industry, I fully anticipate a greater use of machinery, even in dealing with the high priced cosmetic lines. It seems to me reasonable to suppose that cosmetic volume will increase radically, as it did after the last war.

Use of Plastics

There will be a tremendous increase in the application of plastics of various kinds, for collapsible tubes, containers, closures and for numerous wrapping purposes. A great number of heat sealing papers have been introduced during the war and mechanical means for utilizing these will be available. One device for softening pliofilm and other thermo-plastic papers to permit wrapping irregular containers was introduced shortly before the war and during the war has been further developed, so that it will be available in the post-war period for automatic as well as hand operations. Equipment has been developed for applying plastic ribbons and fancy tapes and overseals.

In the process equipment field you may look for two new combination mixer-mills for making face powder. Combined mixers and colloid mills or homogenizers will also be available. I look for a change in the shape of process vessels to permit easier loading. It is virtually certain that tube fillers and powder filling machines will be filled from working height rather than from inaccessible overhead hoppers. Air will be used to a greater extent for conveying, milling and mixing operations than ever before. Pumps have undergone a radical improvement as to the range of viscosities they will handle and there will be a broader use of controlled cooling equipment for packaging as well as process operations.

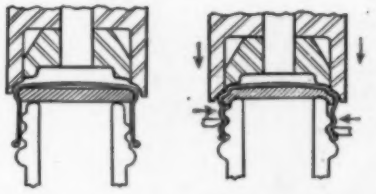
The Appearance Standpoint

I think, moreover, that cosmetic manufacturers will become more conscious of and prouder of their operations; they will be willing to spend more money for stream-lined equipment, which is not only more efficient to operate, but more pleasing to look at.

I have often been impressed by the policy of the Coca Cola Company in setting up local bottling plants in almost every community in the nation, and in these small local bottling plants, they have not hesitated to use ornamental tile on floors and side walls, nor have they hesitated to use polished stainless steel and nickel trim on their equipment. I have often felt a pang of envious disappointment whenever I go into a cosmetic plant doing a business of upwards of a million dollars and find cheap inadequate equipment. I can't help comparing

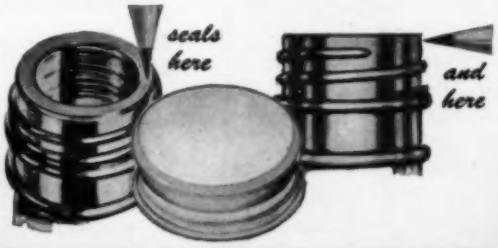
For hard-to-seal-products, try a "TS", the 2-way seal. It seals on both Top-and-Side of the glass finish. Greater protection for a product that volatilizes readily . . . or for an oily product that tried to creep past the seal . . . or a product that develops internal gas pressure. Alseco machines apply the Top-and-Side at speeds up to 300 per minute. A wholly automatic, low-cost operation. Get the whole story now and be all set to use the "TS" when this tighter seal is freely available for civilian packages.

HERE'S HOW THE "TS" WORKS



1. Plain-skirted "TS" is seated squarely on container. Notice how it flares out at the top to accommodate and hold in a liner of extra wide diameter. Liner extends well beyond outer edge of glass finish.

2. Pressure block seats liner uniformly on top of glass and indents a ring in outer edge of cap, forcing liner down around side of glass finish. At same time, threads are rolled on to hold seal securely.



ALSECO "T & S" SEALS

ALUMINUM SEAL COMPANY • 1333 THIRD AVENUE • NEW KENSINGTON • PENNSYLVANIA

SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA

WANT TROUBLE-FREE CONTAINERS FOR YOUR DRUGS ? THEN PACK 'EM IN CANS !

Cans don't break . . . they save shelf space, protect contents, catch customers' attention!

● "I've manufactured drug and cosmetic items for years. So I say—and druggists and housewives will bear me out—that for packaging my products, cans are plenty *trouble-free!*

"Here's what I mean. Cans are *safe!* Safe from breakage in shipping, in display. Safe in the bathroom when handled with wet hands. Safe from smeared and washed-off labels, since labels can be lithographed right on the cans.

"Cans are waterproof...protect contents from bathroom moisture. They're light, compact, economical to ship. In drugstores, cans save space on busy shelves... have plenty of attention value, sales appeal.

"That's why I say cans are so *trouble-free.* And that's why druggists and housewives will join me in a lusty cheer when steel-and-tin cans are available again for packing my products!"

IMPORTANT FOR YOU!

5 BIG REASONS

Why Housewives Prefer

DRUGSTORE ITEMS IN CANS

1. Cans are safe when handled with wet hands.
2. Labels lithographed on cans can't drop off.
3. Cans protect contents from bathroom moisture.
4. Cans are so convenient.
5. ...And so economical.

NATIONAL ADS TELL STORY OF CANS!

This month more than 35,000,000 printed messages are appearing in 8 national magazines and in Sunday supplements throughout the country. These big full-page ads in full color are telling consumers everywhere why no other container combines as many advantages as the steel-and-tin can! ●

CAN MANUFACTURERS' INSTITUTE, INC., NEW YORK

such plants with the little Coca Cola bottling plants which do much less business, with an equipment investment several times as great as that of the cosmetic manufacturer. We have been too prone to utilize cheap equipment of nondescript appearance and efficiency. Machinery can be efficient and beautiful.

Women of the WACS, WAVES and SPARS, who have been so long accustomed to stern discipline, rigorous living conditions, in which cosmetics played but a comparatively small part, will want to splurge. Yet, I am not convinced that such splurging will take the form of frills and furbelows. They have become accustomed to colorful, streamlining in their kitchens and in all the accessories of their daily life. During the war, they will have learned how standardization and simplicity of design increases the availability of all sorts of products, while reducing costs to the user. I believe they will look for beauty and simplicity in design; they will look for especially high quality; they will look for variety and they will look for low prices. All of these demands will create an infinitely larger market than we now enjoy and the very size of the demand will force the adoption of more equipment than cosmetic manufacturers have heretofore used.

READERS' QUESTIONS

EYE CREAM-LANOLIN CLEANSING CREAM: I shall be very thankful to you for a good formula for a special eye cream and a lanolin emulsion that makes a good cleansing cream for sensitive, dry skin. Brooklyn.

An eye cream can be made as follows; if what you want is something in the order of a "tissue" cream for the eyelids and the area about the eye.

Lecithin	**5.0 parts**
Cholesterol	**1.0 "**
Lanolin	**10.0 "**
Expressed almond oil	**59.0 "**
Beeswax	**25.0 "**
Preservative	**sufficient**
Perfume	**as desired**

As to your second question for a good formula for a lanolin emulsion for cleansing a sensitive skin, I would suggest that you try the following:

Petrolatum	**27.0 parts**
White mineral oil (65-75)	**45.5 "**
Beeswax, white	**18.0 "**
Peroxide 17 vols.	**3.0 "**
Lanolin	**3.0 "**
Water	**3.0 "**
Perfume	**0.5 "**

If desired, the peroxide may be omitted and an equal quantity of water substituted.

LEG MAKE-UP: If you have information on how to make cosmetic stockings water resistant or at least so that the rain drops will not show spots on the leg after it drys, we would appreciate such information. This formula has some glycerine in it, along with titanium dioxide, some kaolin and talc, etc. We will appreciate this information and thank you very much. Rochester.

The following provides a basic formula with which you may experiment:

Precipitated chalk	**10.0**
Talc	**5.0**
Titanium dioxide	**3.0**
Bentonite	**2.0**
Alcohol	**8.0**
Glycerine	**3.0**
Wetting agent	**0.5**
Methyl cellulose	**0.5**
Water	**68.0**
Dye and pigment	**sufficient**

Perhaps the spotting tendencies can be decreased by including a small proportion of film forming material like polyvinyl alcohol.

DANDRUFF REMOVER SHAMPOO AND ANTISEPTIC AFTER-SHAVE LOTION: We are going back into the hair tonic manufacturing business and are looking for two good formulas; one for a dandruff removing shampoo and one for an antiseptic after shaving lotion. Will appreciate hearing from you. Charlotte.

One method of making a so-called dandruff remover shampoo would be to incorporate a substance like resorcinol in tincture of green soap. About 3% of resorcinol will probably suffice but since this has a tendency to stain light colored hair, I would suggest that you make a second preparation containing about 3% resorcinol monoacetate. Another dandruff remover suggested by Chilson consists of:

Ortho-phenyl phenol	**0.1 parts**
Sulfonated castor oil	**15.0 "**
Sodium lauryl sulfate	**2.0 "**
Potassium arsenite	**0.1 "**
Alcohol	**40.0 "**
Water	**42.5 "**
Perfume	**0.3 "**

Dissolve the ortho-phenyl phenol, potassium arsenite and sodium lauryl sulfate in alcohol, add perfume. Mix sulfonated oil and water, add the first solution. Mix and filter.

As to an antiseptic after shave lotion, you must realize that any claims for antiseptic properties immediately puts you in the drug class under the rules of the Food and Drug Administration. However, a product that should have good antiseptic qualities can be made from:

Boric acid	**2.3 parts**
Menthol	**0.05 "**
Glycerine	**2.0 "**
Alcohol 39A	**8.0 "**
Witch hazel	**87.15 "**
Perfume	**0.5 "**

By adding up to 0.1% chlorothymol or 0.5% oxyquinolin sulfate, you can greatly increase the antiseptic qualities of your preparation.

COOLING HOT LIPS

FEW PEOPLE would think of comparing molten lipstick with molten steel, but they are similar in at least one important respect. The strength and texture of each depend to a great extent upon how carefully it is cooled.

Precision cooling is especially important in the molding of lipstick. If cooled too fast, it is likely to be brittle. If cooled too slowly, it may become sticky. General Electric Industrial Refrigeration makes sure that it is cooled just right . . . to the right temperature . . . at the right speed.

It's one of countless industrial and commercial applications of refrigeration and air conditioning which are helping—and can help—to improve products or services, to lower production costs, to reduce absenteeism. In your plant, will control of temperature or moisture content improve the product or speed processing? Do you have places where you need local or spot cooling? Or will temperature and humidity control of storage space provide economies in handling or working of raw and finished materials?

Then take advantage of G-E's specialized experience in temperature-humidity engineering, and its vastly improved equipment.

General Electric Company, Air Conditioning and Industrial Refrigeration Division, Section 5045, Bloomfield, New Jersey.

BUY and hold WAR BONDS

GENERAL ELECTRIC

Industrial Refrigeration

Tune in: The "G-E HOUSE PARTY" every afternoon, Monday through Friday, 4 p. m., E W T, C B S . . . The "G-E ALL-GIRL ORCHESTRA," Sundays, 10 p. m., E W T, N B C . . . "THE WORLD TODAY" News, Monday through Friday, 6:45 p. m., E W T, C B S

New Sources of Supply

It has always been American experience that a war with its disruption of the normal channels of trade has opened new sources of supply for American importers. This was dramatically illustrated in the last war when the virtual monopoly of Hamburg in the crude drug trade was broken and American importers were able to establish themselves in many primary markets previously either unknown to them or blocked by German trade agreements.

During the years following the last war, importers in this country were able to establish themselves in a great many if not the majority of primary markets, but this war, with its much larger scope and the complete control of all world shipping by governments and the consequent elimination of normal markets to certain primary producers, has enabled America to contact these producers who have been eagerly seeking a market wherever they could sell.

In addition to this, the enormous growing demand of American industry for such things as perfumes and cosmetics, considerably exceeding the rest of the world, turned the eyes of many producers in this direction. Stimulated by the American market, one of the most interesting new territories to pay substantial attention to the cultivation of perfume oils is Haiti in particular, with Santo Domingo starting development, and with some possibilities throughout the other islands of the West Indies. These places have a soil and climate suitable for the cultivation of certain perfume plants and have in addition the necessary factor of low labor costs. Haiti particularly has shown great promise and America is now the primary importer of their excellent petitgrain du pays, neroli also shows promise and sandalwood, which differs substantially in its odor characteristics from the Indian product.

In the Dominican Republic, where the cultivation of products of this sort is being encouraged by the Government, oil of bay is the chief product with oil of lime next in importance and bitter orange and neroli in small cultivation. Guatemala has been supplying small amounts of citronella from a highly mechanized scientific development in culture which shows some promise of holding its own in competition after the war with the Java oil which it resembles closely, having a high citronellal content. Citronellol and hydroxy citronellal made from this product are of high quality. Another product in Guatemala which shows promise of increasing is lemon grass. The development at present is in the embryo stage.

Before the war Mexico's importance in this country to this trade was largely in its exports of Linaloe, also of Linaloe Seed and Oil of Linaloe Wood. This was used mainly as the raw material for the manufacture of Linalool and its esters, but the competition from the Oil of Bois de Rose from Brazil and also Ho oil from Japan relegated these two valuable products to a minor place until war shortages occurred.

In recent years Mexican Lemon Oil and Lime Oil have become of increasing importance, with the Lime Oil of excellent quality holding real future promise. The Lemon Oil as yet does not compare favorably with our West Coast oil.

Brazil has become quite a substantial factor in Menthol, Eucalyptus, and Orange Oil, Brazilian is becoming widely recognized for its excellent quality. The Lemon Oil so far produced in Brazil has a characteristic flavor not particularly acceptable to the American market, but some importations have been made. Sassafras from Brazil has relieved a great shortage among soap manufacturers in perfuming soap flakes and kindred products and has been used as a basic material for the manufacture of Heliotropin, a valuable aromatic chemical.

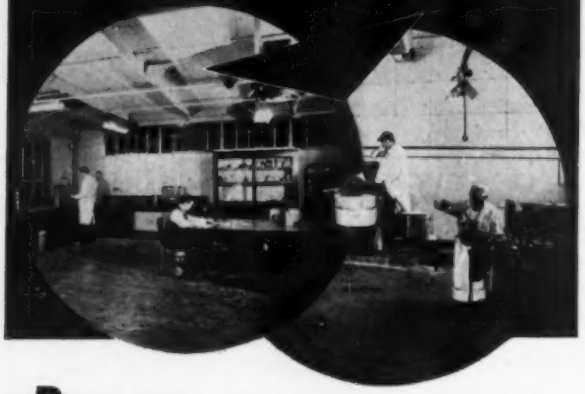
Chile has not yet become of any importance to the American market. Production of several essential oils to date is extremely small. Some promise has been shown in such products as Eucalyptus, Peppermint, Pine and Lavender.

Before the war there was every evidence that Russia planned a substantial increase in the production of essential oils, especially around the Crimea where favorable conditions in soil and climate exist. There appears to have been a further development in this industry even during the war and there seems to be every evidence that Russia will be an important exporting country for several widely used essential oils. Russia is producing a Peppermint of excellent quality and flavor which before the war was widely used in Europe. It is possible that Russia will be a substantial grower of this crop during the post-war years. Another Russian product that should hold great interest for America is Lavender. It is said that the quality of this Lavender and its odor characteristic are very similar to the French product. Other Russian oils of promise which will undoubtedly play their parts in American post-war importing are Coriander, Clary Sage and Geranium. The huge Russian and Siberian forests offer boundless opportunities for a further extension of their production of Oil of Pine Needle.

There is no question also that the post-war period will bring our importers in contact with North Africa, with Egypt, with Syria and Palestine. Even before the war Palestine had a small but thriving industry. Egypt was already producing some Jasmine and North Africa, largely through French interests, was rapidly expanding plantations and production.

It is evident that the post-war period for American business will be less isolationist in character just as our political contact will be 'ess isolationist. America will have a new interest and a greatly expanded contact both politically and economically with South America, with the Near East, with Russia and with many other parts of the world which formerly looked exclusively toEurope for the marketing of their products. Many of these products which America formerly bought through second, third or fourth hands will undoubtedly during the coming period be bought direct from the sources.

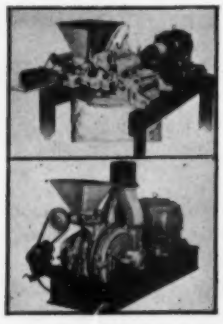
Let this approach to a pulverizing problem be YOUR GUIDE



Before establishing any new pulverizing operation in your plant, there's a proven method of justifying every step in that procedure, scientifically as well as practically.

Here at Pulverizing are maintained the most up-to-date and complete research and test grinding facilities. In laboratory and test grinding room, microscopic studies of particle size and shape are made, electrical instruments make accurate power consumption readings, automatic stop clocks check capacity, recording thermometers reveal temperature variations . . . these and more assure an approach to your pulverizing problem that lifts it out of the realm of guess . . . make the results a real guide for your operations.

The report of a test grind of your material made on regular production MIKROS of all standard sizes, wet or dry grinding, may mean the answer you have been seeking. Our test grinding facilities are at your disposal. No obligation or cost involved. Simply send for Confidential Test Grinding Data Sheet.



Now 2 types to meet your pulverizing needs

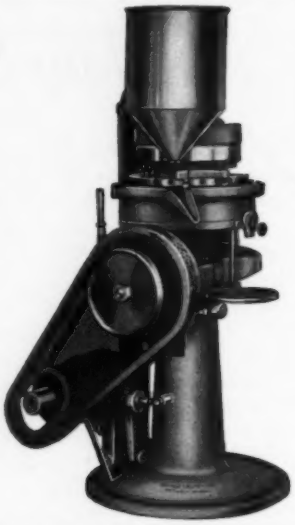
THE MIKRO-PULVERIZER
For over 20 years the leader in producing fine grinds of a large variety of materials.

THE MIKRO-ATOMIZER
A new mechanical, screenless unit for producing ultra-fine powders of 1 to 25 micron particle size.

Write for MIKRO-PULVERIZER Catalog and MIKRO-ATOMIZER Bulletin

PULVERIZING MACHINERY COMPANY
22 CHATHAM ROAD, SUMMIT, N. J.

MIKRO-PULVERIZER (FINE) -ATOMIZER (ULTRA FINE)



A NEW COLTON ROTARY TABLET PRESS
SERIES 200-25 ROTARY TABLET PRESS

The design of the Series 200-25 Tablet Machine is an outstanding engineering achievement, the culmination of years of experience in building tablet machines. This compact machine incorporates refinements that provide an entirely new standard of performance for this type of equipment.

ARTHUR COLTON COMPANY
2620 East Jefferson Established 1884 Detroit, 7, Mich.

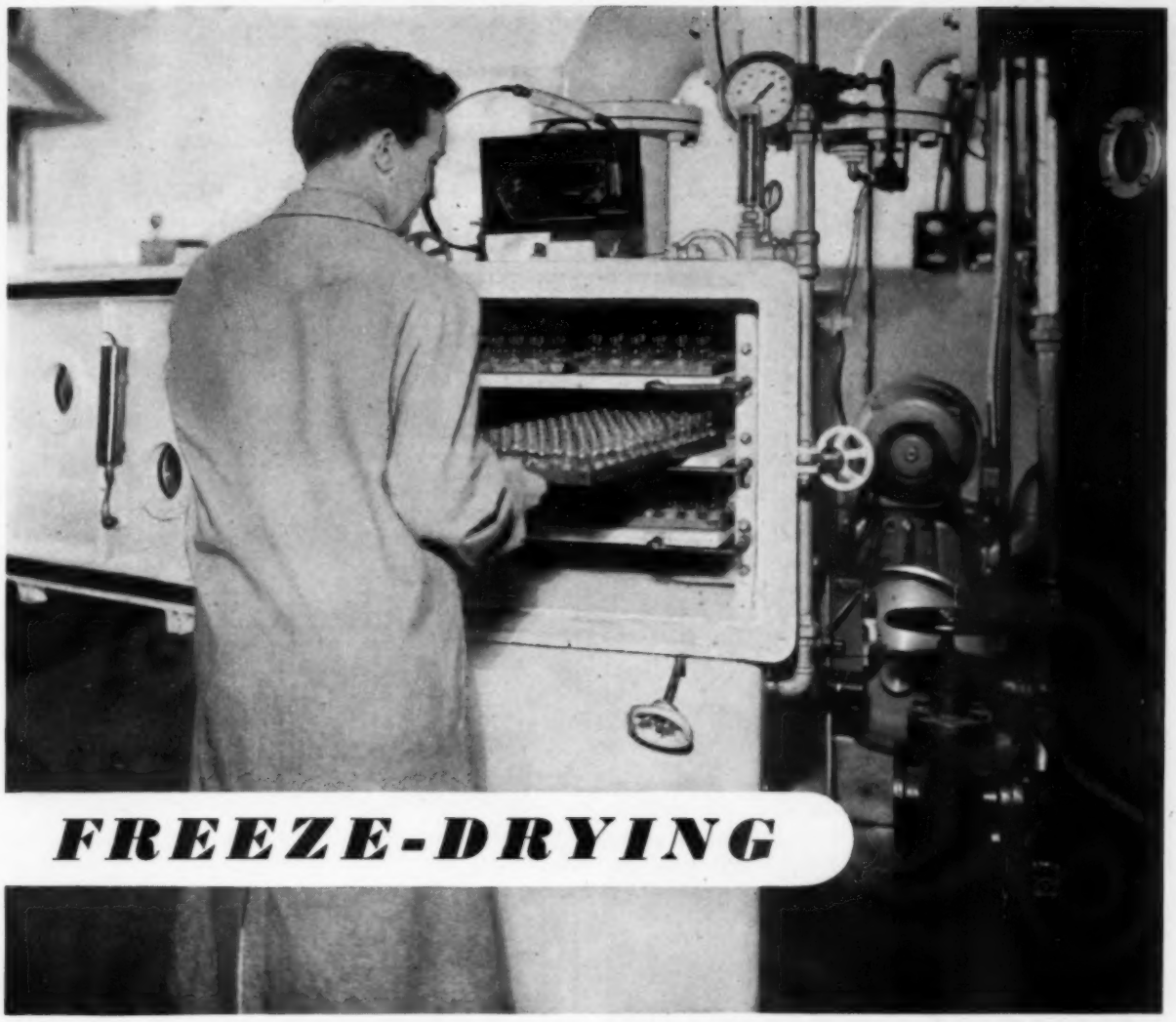
FILCO FILTER PAPERS
Assure Uniformity of Products

For batch control in processing raw materials to finished products, you can rely on "Engineered" Filco Filter Papers. Any order can be designed to fit your specific need and particular make of filter. Doubt and guess-work are eliminated from the process. Our Laboratory Technicians are at your service. Write for FREE Working Samples.

Specialists in the Manufacture of:

Filter Paper, Cloth, and Asbestos Pads.
Filter Presses.
Pumps.
Stainless Steel Storage and Mixing Tanks.
Easy-Ride Gravity Roller Conveyors.

THE FILTER PAPER CO.
53 East 24th Street - Chicago, Ill.



FREEZE-DRYING

. . . the proved method and equipment for unlimited preservation, without refrigeration, of highly perishable plasma, penicillin, serums and other biologicals.

Stokes Lyophile-Cryochem freeze-drying equipment for desiccation from the frozen state, has been a vital key to the development of the Penicillin and Blood Plasma Programs. It is equally valuable in the preservation of serums and other labile biologicals. The method is one of Drying by Sublimation* under high vacuum.

Over 10 years ago Stokes, in conjunction with the University of Pennsylvania and Sharp and Dohme, pioneered in the development of equipment for use commercially as well as for laboratory and hospital. Today, more than 275 Stokes units are in use on all kinds of products in universities, research laboratories, government health services, hospitals and commercial plants throughout the United States, and 24 foreign countries.

Stokes engineers and manufactures complete equipment for this process, from test tube to full-scale production capacity.

Facilities and authoritative assistance are available for research with and development and application of desiccation from the frozen state. A complete pilot plant in the Stokes Laboratory is used for tests and demonstrations. Wide field experience is also at your disposal. Our technical staff invites your consultation.

F. J. STOKES MACHINE COMPANY
5932 Tabor Road **Philadelphia 20, Pa.**

**Jour. of Immunology, Vol. 50, No. 1, 1945*

50th year of Service to Industry

F.J.Stokes *High Vacuum*
PUMPS · GAUGES · EQUIPMENT

FJS Est 1895

GLASS TANKS by "PITTSBURGH"

- Maximum sanitation for the product
- No contamination of solutions
- Resistance to temperature shocks
- Long life and good service
- Tanks impervious to practically all strong solutions

"Pittsburgh" Glass Tanks are available made of transparent glass to make checking of contents easy. Or of opaque Carrara Glass. Or as linings for your *present* tanks.

Send coupon for complete information
GLASS TANKS BY "PITTSBURGH"

Pittsburgh Plate Glass Company
2176-5 Grant Building, Pittsburgh 19, Pa.

Please send me, without obligation, free literature on Glass Tanks by "Pittsburgh."

Name.....

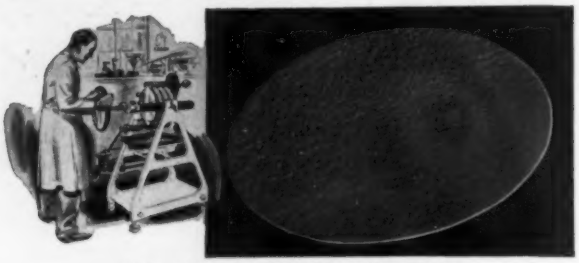
Address.....

City..... State.....

PITTSBURGH PLATE GLASS COMPANY

MAKE YOUR OWN GLASS PARTS WITH AN EISLER MACHINE

CHAS. EISLER
EISLER ENGINEERING CO.
775-50 13th ST. AVON AVE NEWARK 3 N. J.



THE ERTEL NEUTRAL ASBESTOS

Filter Sheets

These sheets are free from ingredients that cause unfavorable reactions in the filtrate. Quality and appearance of your product will be improved with Ertel Sheets. Ten grades from course to ultra-fine.

FREE LABORATORY SERVICE

Ertel maintains a free laboratory service where liquids are tested, filtered and returned for your inspection. A sufficient quantity of Ertel sheets, grade determined by test, will be sent for a single set-up in your filter. You can then verify the superior results in your own plant.

CATALOG The fully illustrated Ertel Catalog-12 describes the complete line of Ertel Liquid Handling Equipment. Send for a copy today; no obligation of course.

ERTEL ENGINEERING CORPORATION
KINGSTON, NEW YORK
NEW YORK CITY SALES OFFICE AND SHOWROOM
40 WEST 40th STREET NEW YORK 19, N. Y.
LIQUID HANDLING EQUIPMENT ENGINEERS

Here's what you'll like about the new

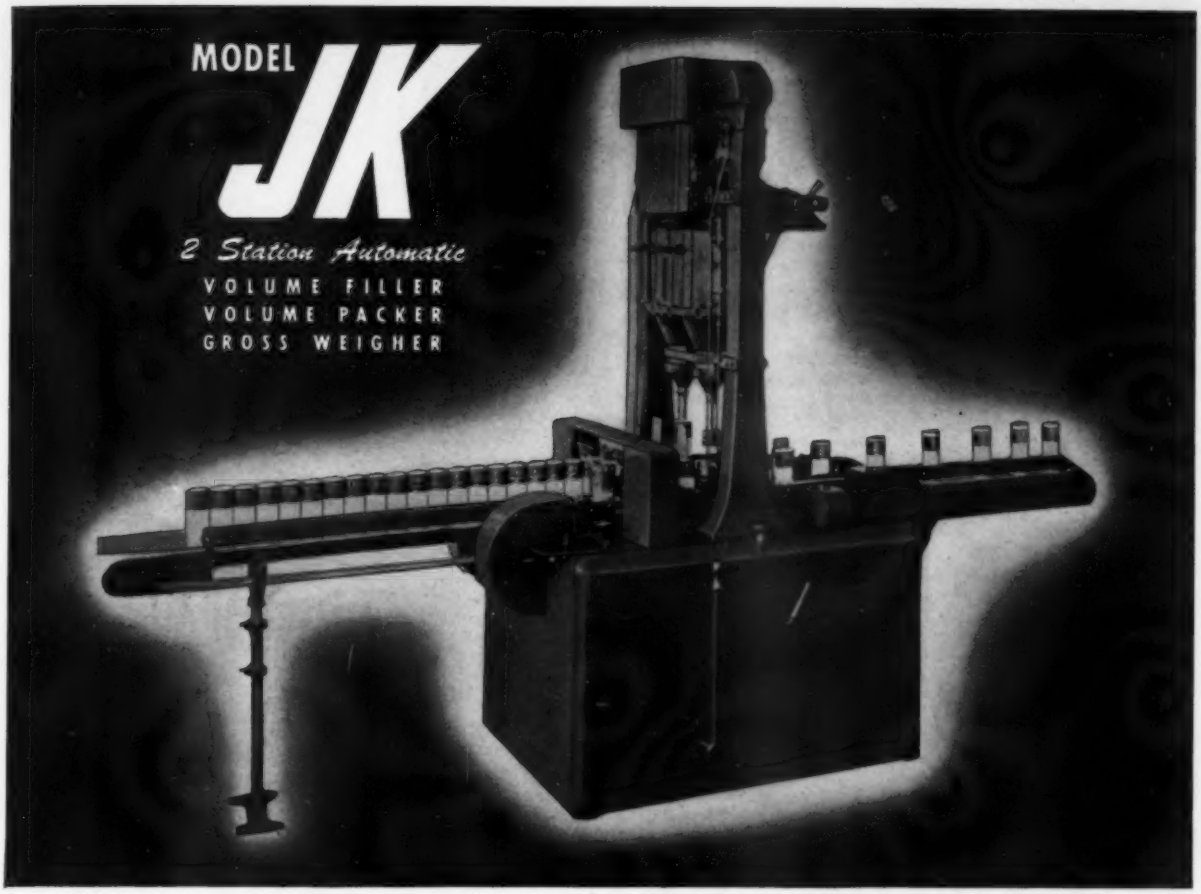
..."HAGERTY HANDY FILLER"

- Durable
- Moderately priced
- Eliminates spilling
- Simple to operate
- Convenient sizes
- Light construction

The most practical hand filler for creams, lotions and liquids.

Write for illustrated folder and prices

HAGERTY BROS. & CO.
10 Platt Street **New York. N. Y.**
Est. 1849



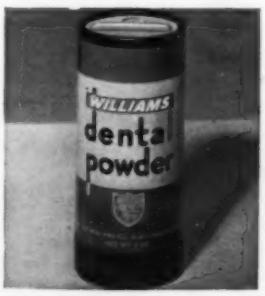
. . . for all types of powdered, granular and paste materials

The Model JK is an Automatic Packer that will also operate as a Volume Filler or Gross Weigher. This machine fulfills every requirement for advanced means of automatically handling powdered, granular and paste materials of almost all descriptions.

The Model JK has two filling stations. When the machine is used as an Automatic Volume Packer the empty containers are elevated, causing the actual filling to take place under the amount of controlled pressure suitable for the type of material and the size of container into which it has to be packed. This same principle is used when the machine is equipped as a Packer-Weigher, except that the main portion of the contents is packed under pressure, the remainder finished by weighing for accuracy. When the machine is used as a Volume Filler or Gross Weigher, provision can be made to incorporate a vibrating type of settling device to settle the material after filling.

The machine can be equipped for intermittent conveyor motion to facilitate handling of oval or irregularly shaped containers. With this intermittent motion, the conveyor moves just enough to deliver one container at the transfer station, thus preventing climbing and piling up of the containers.

The many new automatic features, plus the speed and accuracy of the JK, soon pay for the machine through savings on labor costs alone. It will pay to get full details and specifications — there are many features never available before — write today for bulletin which gives complete data on the Model JK!



Filled automatically on the JK at the rate of 60 per minute.

Send U.S. details on any of your packaging problems —we have the machines and the engineering background to help solve them.

US *Automatic Box Machinery Co. Inc.*

Owning and Operating

NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

18 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: NEW YORK CLEVELAND CHICAGO
LOS ANGELES (KRUGH EQUIPMENT & SUPPLY CO.)

STENCILED SHIPMENTS INSURE FAST HANDLING

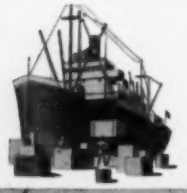
STENCIL MARK YOUR SHIPMENTS

CLEAR, EASILY READ, PERMANENT STENCILED ADDRESSED SHIPMENTS move through the Shipping Room faster and are speeded all along in transit.

THESE NEW DIAGRAPH-BRADLEY FOUNTAIN STENCIL BRUSHES . . . each represent major advancements in stencil brush design and efficiency . . . featuring: STURDY ALUMINUM CONSTRUCTION • LIGHT WEIGHT • LARGE FENDER GUARD to prevent ink on bristles getting on table, clothing, etc. • LARGE INK CAPACITY • ALWAYS READY FOR USE. THE PENACTION FEED* operates like a fountain pen • THE SIDE BUTTON STREAMLINER* is controlled by a diaphragm valve • CAN'T LEAK.

*Pat. App. For

Railroads and Truckers now recommend STENCILING. See: Revised Marking Rule No. 6 revised to include the following "Each package must be stenciled or otherwise plainly marked."



FOR SPEEDING SHIPMENTS USE
- D-B INKS
- D-B STENCIL BOARDS
- D-B FOUNTAIN STENCIL BRUSHES
- D-B FOUNTAIN MARKING PENCILS
- D-B STENCIL CUTTING MACHINES

COMPLETE SHIPPING ROOM SUPPLIES

D-B. DIAGRAPH-BRADLEY
STENCIL MACHINES
NO. 75 DIAGRAPH-BRADLEY BUILDING
ST. LOUIS 8, MISSOURI
Distributors in Principal Cities
See Your Telephone Directory—Classified Section Under STENCIL CUTTING MACHINES

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF STENCIL CUTTING MACHINES

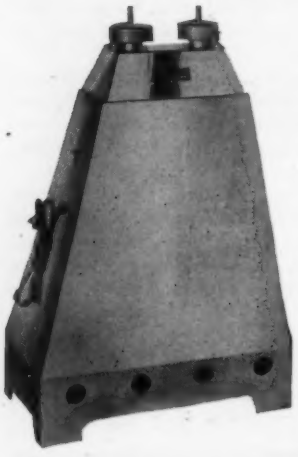
COMPANION SEMI-AUTOMATIC MACHINES

For Efficient Cleaning and Filling of Containers

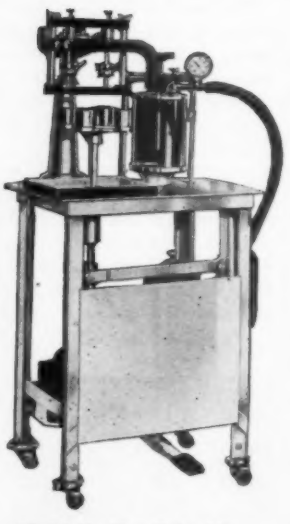
These two machines will clean and fill 50 to 75 gross of containers per 8-hour day, depending upon size of containers and dexterity of operator.

They are both 2-Tube Machines and handle two containers at a time. Are portable and come furnished with cord and plug for attaching to lighting circuit. Both are fully automatic in operation except for placing and removing of containers by operator and require only ordinary skill for efficient operation. They serve efficiently not only for small producers, but in larger plants as well for use on special runs.

The same carefulness in details and efficiency in construction is built into them, as is found in our larger fully automatic and high speed bottling machinery.



E-Z Cleaner is a bottle cleaner for cleaning new glass. Machine uses compressed air and is furnished with Compressor and Motor. Easily connected to lighting circuit. Floor Space—27 x 14 in.



Model B, Two-Tube Vacuum Filler. An ideal filler for filling from any tank, barrel, jar or 5-gallon bottle on floor. Floor Space required 30 x 18 inches.

U. S. BOTTLERS
Machinery Co.
4011 N. ROCKWELL ST., CHICAGO

MANUFACTURERS OF
PUMPS
CAPPERS
FILTERS
CONVEYORS
WASHERS & DRYERS
WASHERS
CORKERS
FILLERS

A Clean, Dustless Fill . . . a Tight Pack for

POWDERED MILK, COCOA and other Dehydrated Foods, DRUGS and COSMETICS, POWDERED CHEMICALS, etc.

with the S&S

"AUGER-VAC"

For filling such powders as powdered milk, cocoa, flour, dehydrated foods and many others that require some packing to fill a container, the Stokes and Smith Co. developed combination vacuum-auger method has been tried and enthusiastically approved by many food manufacturers.

This method combines the advantages of auger feed for speed and accuracy and of the vacuum method of filling without dust.

Tin cans, glass jars or fibre containers may be used provided they are air-tight to hold a vacuum.

The necessary vacuum is created by a motor driven vacuum pump. A valve control mechanism provides correct timing to the vacuum-auger head.

The "Auger-Vac" Method may be used on the S & S Single Unit Filling Machines or the Duplex Automatic Machines. Speeds—15 to 100 per minute.

SEND US SAMPLES OF YOUR CONTAINERS. WE WILL GIVE YOU COMPLETE INFORMATION.

"Auger-Vac" Equipment for S & S Universal Filling Machines is fully covered by U. S. Pat. No. 2,330,862.

STOKES & SMITH Co

4912 Summerdale Ave., Philadelphia 24, U.S.A.

FILLING • PACKAGING • WRAPPING MACHINES

Speeds to suit your needs—15-30-60-120 per minute

"Better machines for better packages"

HORM ASBESTOS FILTER PADS

Available Now!

CLARIFLOW STERILFLO

ASBESTOS FILTER PADS

Laboratory controlled production insures consistent filtration—Hydrogen Ion apparatus controls pH in manufacture.

Increased production facilities now make these high grade pads more readily available.

Reasonable deliveries.

Send at once for sample loading for your filter.

Registered Trade Marks*

F. R. HORMANN & CO., Inc.

127 Boerum Place, Brooklyn 2, N. Y.

AUTOMATICALLY YOURS

New markets, wider distribution, await the manufacturer who packages in small paper packets. Tablets, powders, pills, soaps, and scores of drug products in Brown packets, filled and sealed automatically on Brown equipment, have made selling history. Let us test a small quantity of your product for you without obligation.

BROWN

BAG FILLING MACHINE CO.
FITCHBURG, MASS.

West Coast Reps., Peter D. Bowley & Associates, 369 Fifth St., San Francisco, Cal.

Compounder's Corner

Wool Wax Alcohols in Cosmetics

In England, during the last few years, wool wax alcohols have assumed an important role as emulsifiers for cosmetic and pharmaceutical manufacture. Because they have definite advantages and because they will undoubtedly find their way into American processes, the very comprehensive report on wool wax alcohols and their uses in the cosmetic industry by E. S. Lower is of decided interest. Writing in *S.P.C.* for February 1945, Lower points out that the use of lanolin (wool wax) in the cosmetic industry is now well known and well established. These uses have sprung from the peculiar composition of wool wax. It is a mixture of esters of cholesterol, lanosterol, cetyl alcohol and a number of similar but probably less important alcohols, and it is to these alcohols, and more especially to cholesterol, that wool wax owes its special properties, and hence its versatility.

A newer group of chemicals has now been made available to the cosmetic chemist, namely, the group containing these very alcohols which form the basic components of wool wax. There are at present available four different products:

1. The mixed wool wax alcohols.
2. A cholesterol-rich fraction containing upwards of 70% cholesterol.
3. A cholesterol-rich fraction containing about 50% cholesterol.
4. Blends (styled "absorption bases") of certain wool wax alcohol fractions and wool wax esters.

The literature on the subject of the component alcohols, etc., which comprise the mass referred to as wool wax alcohols is found to contain many confusing cross statements, but certain alcohols have definitely been isolated and identified or announced as being entirely new. These can be grouped in three of the series of known alcohols: (1) sterols, (2) triterpene-like alcohols; and (3) aliphatic alcohols.

Only two true sterols so far have been definitely isolated from this mixture of alcoholic bodies, and these are—(a) cholesterol and its saturated congener, (b) cholestanol (referred to also as β-cholestanol and dihydrocholesterol, not to be confused with dehydrocholesterol).

The mixed wool wax alcohols at present on the market are a brownish-yellow wax-like mixture, altering when warmed from a state of extreme brittleness to a very viscous liquid which takes many hours to re-set to its original condition. It is intended to place a vastly improved quality of this product on the market at the end of the war.

The emulsifying properties form one of the most important characteristics of mixed wool wax alcohols, and were responsible to a great extent for their recent introduction into the British Pharmacopoeia. These alcohols have the ability to emulsify large quantities of water either in their original form, when plastic cream-colored preparations result resembling hard plasticine; or blended down with hydrocarbons, including the liquid, soft and hard paraffins, kerosene, white oils and white spirit. Liquid fatty alcohols such as oleyl can also be used as diluents. When such blends are agitated with water, or when water is stirred into the more solid products, intermittently, emulsions of the water-in-oil type result.

The applications and potential applications of wool wax alcohols in cosmetic preparations have been described as ranging from dispersing and emollient agents in lipsticks, to biological or active ingredients in hair tonics and from basic constituents of eyebrow pencils to active or stabilizing agents in face and hair creams.

Wax alcohols are included in cosmetics for several reasons. For instance, they have the effect, in differing degrees, of producing soft creams. They all have an emollient effect on the skin and give this a very smooth and satisfactory "feel." They improve the texture of creams of the vanishing cream type. They are good emulsion stabilizers, apart from being emulsifying agents. Some help to suppress "shine" imparted to the skin by many creams. They have also had attributed to them the quality of being able to act as effective penetrating vehicles for absorption into the skin, with or without the inclusion of antiseptic ingredients, etc. They have a stiffening effect on many creams and are capable of increasing the viscosity of many oils, mineral and otherwise. They have also been included in lists of cosmetic ingredients capable of increasing the viscosity of soapless shampoos.

Below are given examples of the various types of cosmetic products which may be prepared with the aid of mixed wool wax alcohols, which in most cases are used as the fundamental emulsifying agent. These formulae should not be regarded as finished products, although in many cases they are, but rather they are given as illustrations from which sound products may be developed.

Cold Cream

	(1)	(2)	(3)
Wool wax alcohols	0.3	3	5
Vegetable oil	..	12.5	..
Beeswax	15	7	..
Hard paraffin	..	1.5	..
Liquid paraffin	50	37.5	40
Spermaceti	..	7	..
Ceresin	..	2½	10
Borax	1	0.5	..
Water	33	28.5	35
Soft paraffin	..	..	10

Hair Creams

	(1)	(2)
Wool wax alcohols	2.0	4.0
Hard paraffin	15.0	...
Liquid paraffin	63.0	130.0
Water	23.0	60.0
Lanolin	2.0	3.5
Beeswax	..	6.0
Glycerine	..	3.0
Triethanolamine	..	0.5

Sports Cream

Wool wax alcohols	2.5
Stearyl alcohol	0.8
Soft paraffin	27.9
Lanolin	8.0
Titanium dioxide	1.0
Water	60.7

Make-Up Base

Wool wax alcohols	1.5 parts
Soft paraffin	11.0 "
Ozokerite	1.8 "
Liquid paraffin	8.0 "
Zinc oxide	12.0 "
Insoluble color	q.s.

GLYCERINE,
Essential War Worker, Now Available to You!

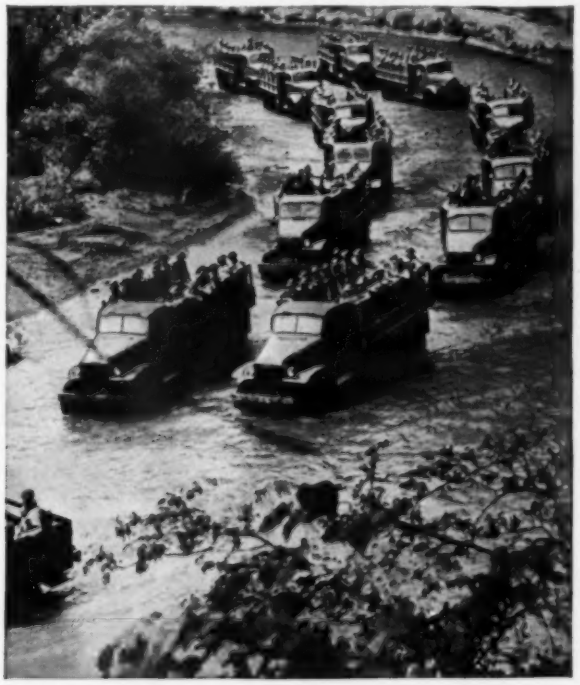
GLYCERINE, the versatile ingredient, has hundreds of war uses. It's important in the making of many medicines, foods and food products, packaging materials, textiles, vitamins, lubricants, as well as a vital chemical in the making of many explosives, plastics, surface coatings, and other materials.

The Surgeon General's Office, the Medical Corps, and other important governmental agencies recognize the need of using glycerine in many applications where human life is concerned. Another reason why war demands upon glycerine are huge.

But now there is glycerine for the production of civilian goods, also! If you are using emergency war substitutes, you'll want to get back to safe, time-tested glycerine. And when you plan new products, you'll want to use glycerine, too. Send for the free booklet, "Nothing Takes the Place of Glycerine — 1583 Ways to Use It." Address: Glycerine Producers' Association, 295 Madison Avenue, New York 17, N. Y. Dept. F-6.

Wholesome Eating! Glycerine is a time-tested ingredient of candies, cellophane food wrappings and casings, flavorings, colorings, tobaccos, and other products used by humans. Use glycerine!

Glycerine, the Healer. Glycerine, important in many explosives, is just as important in many medicines. It has been proved by generations of use. Use wholesome glycerine in your pharmaceuticals!



Better Paints! Alkyd resins, used to make long-lasting paints for war equipment, mean better paints for peace. Glycerine is a prime raw material in alkyd resin manufacture.

Safe In Cosmetics! Glycerine, important part of many protective lotions and ointments used by military men in the field, can help you make sought-after cosmetics. Use glycerine—*and be sure!*

Plenty of Glycerine! If you have been using emergency substitutes, you'll want to get back to safe, time-tested glycerine. And you'll want to use glycerine in your new products, too!

This base is intended for use in the manufacture of cream rouge and eye shadow. Parts are by weight.

Massage Preparations

	(1)	(2)
Wool wax alcohols	5	1
Beeswax	..	..
Liquid paraffin	40	20
Water	..	..
Sesame oil	55	76
Lecithin	..	1
Lanolin	..	2

Mixed wool wax alcohols are used in lipstick manufacture as emollients and also as aids to the dispersion of the various pigments and dyestuffs used. The frequent difficulty encountered, for instance, in the dispersion of eosin is greatly reduced if about 10 per cent of wool wax alcohols is included in the formula.

Lipstick Base

Wool wax alcohols	20 parts
Beeswax	22 "
Castor oil	10 "
Soft paraffin	3 "
Cocoa butter	5 "
Cetyl alcohol	3 "

The wool wax alcohols will give a finer dispersion of color and their emollient effect will assist in keeping the lips from cracking and give a smoothness to the product difficult to procure by other means.

Foundation Cream

Stearic acid	14 parts
Wool wax alcohols	2 "
Glycerine	5 "
Caustic potash	0.75 "
Borax	0.25 "
Water	75 "

Night Cream

Wool wax alcohols	6 parts
Soft paraffin	6 "
Lanolin	20 "
Liquid paraffin	30 "
Glycerine	10 "
Water	40 "

Cleansing Cream

Wool wax alcohols	2 parts
Lanolin	10 "
Liquid paraffin	50 "
Hard paraffin	1.5 "
Water	45 "

Wool wax alcohols can be used in Nail Varnish Removers to overcome the degreasing effect of these solvent blends, and possibly in nail varnish removers of the paste or cream type. One such preparation contains, besides wax, Cellosolve 58 per cent, cyclohexyl acetate 2 per cent, triethanolamine soap 20 per cent.

Wool wax alcohols are employed in the compounding of hair packs or hair conditioners of the more advanced type designed to exert a restorative effect and incorporating:

Glyceryl monostearate	12%
Wool wax alcohols	3%
Triethanolamine stearate	8%
Lecithin, vegetable	1%
Castor oil	3%
Distilled water	73%
Preservative	q.s.

In certain types of cosmetics, especially those designed for the specific purpose of replacing skin fats which are removed during washing operations, the incorporation of irradiated wool wax or wool wax alcohols is regarded as beneficial. The irradiation of wool wax alcohols, with a view to "vitamizing" the products, has been carried out by exposing a moving layer of the alcohols to the action of ultra-violet rays.

Hand Cream

Wool wax alcohols	5 parts
Hard paraffin	24 "
Soft paraffin	10 "
Liquid paraffin	60 "
Glycerine	5 "
Water	80 "

While many of the cosmetic products outlined here contain no materials which are likely to go rancid and, therefore, theoretically, do not call for preservatives, it is always advisable to include these, guarding, for instance, against the influence of the containers in which the materials are to be filled, ultimate exposure, etc.

Brushless Shaving Stick Patent

A brushless shaving preparation in stick-like form, which may be applied to the face by direct application, forms the basis of U. S. Patent 2,366,759, granted to R. Thomas and H. Whitham. Made without a water phase, and consisting chiefly of a mixture of vegetable oil and a waxy ingredient, the resulting product is sufficiently plastic when rubbed on the moistened face of the user to leave a layer, preferably opaque, having the necessary lubricating, hair-softening and other properties for shaving purposes.

The following is a specific example of the composition of such a brushless shaving stick:

Sesame oil	38.75 parts
Spermaceti	45.00 "
Stearine	7.50 "
Tallow soap	1.50 "
Partial polyglycerol fatty acid esters	4.00 "
Titanium oxide	2.00 "
Perfume	1.25 "

Selective Adsorption by Activated Carbon

A note in Chemical Industries (*56: 256, 1944*) *tells us that research studies have revealed that the surface of carbon is covered with a multitude of adsorptive centers. These centers may be likened to tiny hooks that are able to lock up certain molecules from a solution. Many different types of surface locks are present and we can apply the familiar thought of a special key for each lock. Thus, one type of surface lock will hold molecules of phenol whereas an adjacent lock may hold alcohol molecules. This knowledge has been of great help in advancing these newer applications and has also resulted in developing new types of active carbons for special tasks.*

New assistance has been provided by more recent studies which reveal methods of destroying undesired surface locks. Prolonged grinding or oxidizing chemicals, can cause carbons to lose certain undesired powers of attraction. Another method that gives promise is to employ types of solvents that block off or blanket undesired surface locks and leave free those that are needed. It is still too early to assess fully the value of these new discoveries but they will extend the use of active carbon for many new products.

Synergizing Pyrethrum

In studying synergists for pyrethrum against the body louse, R. C. Bushland, G. W. Eddy and C. N. Watts (*J. Econ. Entomol.* 37:485, 1944) found that sesame oil, ethylene glycol ether of pinene and *N*-isobutylundecylenamide increase the toxicity of pyrethrins to *Pediculus humanus corporis*. *N*-isobutylundecylenamide was most effective; increasing the initial toxicity of the purethrins about 100 times. A powder containing one per cent pyrethrins in pyrophyllite was effective for four days while a powder containing 0.2 per cent pyrethrins and 2 per cent *N*-isobutylundecylenamide in pyrophyllite was effective for eight days.

Application of this information is apparent in a spray for head lice, crab lice and scabies announced by G. W Eddy in *War Medicine* (6:319, 1944). This spray is now being used by the Army in delousing procedures and has caused no ill effects. With alcohol as the carrier, and the constituents incorporated on a weight per volume percentage, the spray contains:

Benzyl benzoate	10.0
Pyrethrins (from 20% concentrate)	0.2
N-isobutylundecylenamide	0.5
2,4-dinitroanisole	2.0

We Offer the Following From Stock

ALOES, Curacao and Cape
ALTHEA ROOT
ANISE SEED
BALSAM COPAIBA
BALSAM PERU
BALSAM TOLU
BELLADONNA Leaves and Root
BOLDO LEAVES
BORRAGE FLOWERS
BUCHU LEAVES
CARAWAY SEED
CELERY SEED
CHAMOMILE FLOWERS
CHAULMOOGRA OIL
CLOVES, Zanzibar
COCILLANA BARK
COLOCYNTH PULP
COLOMBO ROOT
CORIANDER OIL AND SEED
CUMIN SEED
DANDELION ROOT
DILL SEED, Indian
ERGOT OF RYE
FENNEL SEED, Indian
FOENUGREEK SEED
GENTIAN ROOT
GINGER, Jamaica, Calicut
GRAINS OF PARADISE
GUM ARABIC AMBER SORTS
GUM KARAYA
HELLEBORE ROOT WHITE
HERBA HERNIARIAE
HERBE MENTHE
HOREHOUND HERB
IRISH MOSS
JUNIPER BERRIES
KAMALA POWDER
LAUREL LEAVES
LAVENDER FLOWERS
LINDEN FLOWERS, with Leaves
MAHUANG, Chinese
MARJORAM LEAVES
NUX VOMICA
OAK MOSS
ORANGE OIL, Sweet
ORRIS ROOT
PEPPERMINT OIL
PIMENTO, Jamaica
POPPY SEED, Indian
PSYLLIUM SEED AND HUSKS
QUINCE SEED
RHUBARB ROOT
ROSEMARY LEAVES
ROSEMARY OIL
SAGE LEAVES
SARSAPARILLA ROOT
SAVORY
SENNA LEAVES AND PODS
SESAME SEED, Hulled and Natural
STRAMONIUM LEAVES
STROPHANTUS SEED
THYME LEAVES & OIL
UVA URSA LEAVES
VALERIAN ROOT

AMINOPHYLLINE
BARBITAL
EHPEDRINE SALTS
GUM CAMPHOR, Japanese and Domestic
ICHTHAMMOL, N.F.
VITAMIN PRODUCTS

• Other Imports Arriving Daily. • We Offer a Complete Line of Pharmaceutical Pills, Tablets, Liquids and Ointments. • All Orders and Inquiries Given Immediate Attention.

KACHURIN DRUG COMPANY

Manufacturers • Importers • Exporters • Distributors

DRUGS - CHEMICALS - OILS - BOTANICALS

525 West 43rd Street, New York, N. Y.

Telephones: BRyant 9-7100-1-2-3-4 • *Cable Address:* Kachurin, New York • *Codes:* A. B. C. 5th & 6th Edition and Bentley's

ISOPROPYL ALCOHOL AVAILABLE FOR:

SHAMPOOS: Isopropyl Alcohol aids in cleaning hair and scalp thoroughly and in leaving hair soft and lustrous.

HAIR AND SCALP PREPARATIONS: Isopropyl Alcohol as a vehicle for hair and scalp preparations aids the cleansing and antiseptic value of the tonics.

STERILIZING SOLUTIONS: 40% Isopropyl Alcohol will kill dried Bacillus Coli in ¼ minute. 50% Isopropyl Alcohol is equivalent to 70% ethyl alcohol for killing Bacillus streptococcus and staphlococcus.

BODY RUBS: Isopropyl Alcohol evaporates slowly, thereby prolonging the cooling effect when used in body rubs. Isopropyl Alcohol has no denaturants.

FACE AND HAND LOTIONS: Isopropyl Alcohol evaporates slowly, has little tendency to dry the skin, and aids in keeping the skin soft.

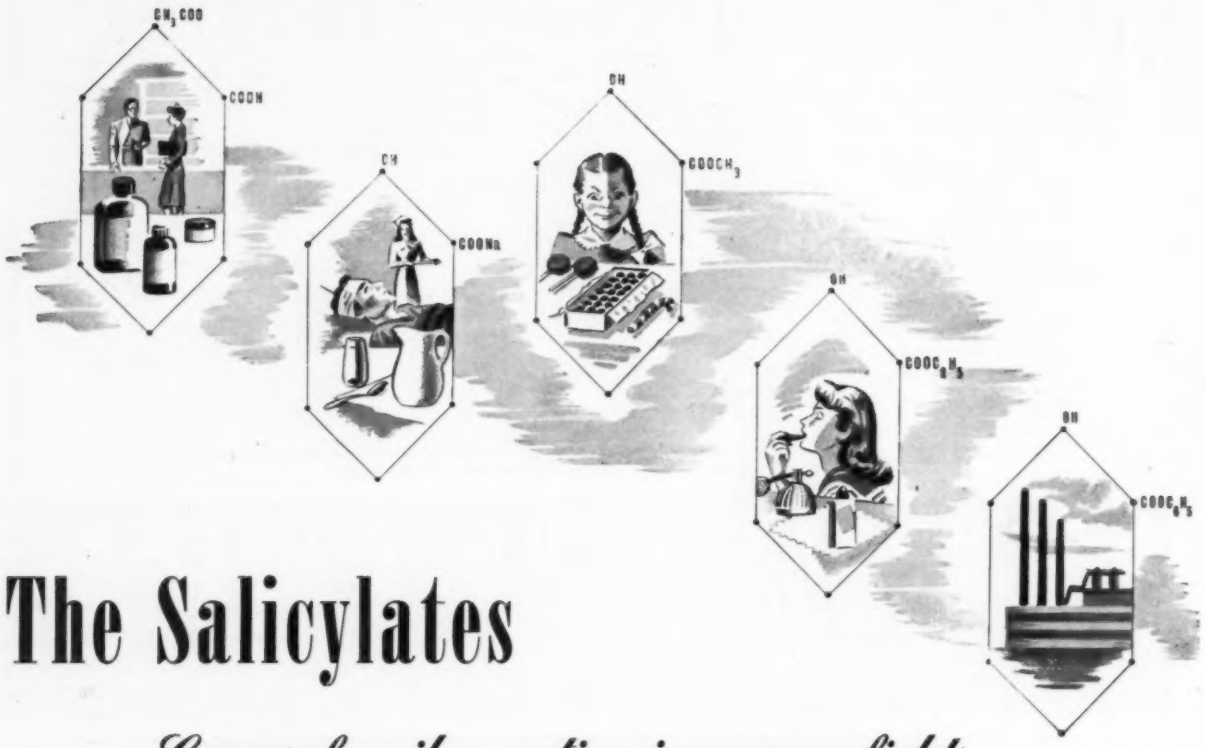
AFTER SHAVE LOTION: Isopropyl Alcohol is excellent for this product because it aids the after-cooling and skin-freshening qualities of the lotion.

Use 91% Isopropyl Alcohol and Release War Materials

STANDARD ALCOHOL COMPANY

26 BROADWAY NEW YORK, N. Y.

AN IMPORTANT GROUP AMONG THE MANY DOW CHEMICALS USED BY AMERICAN INDUSTRY



The Salicylates

Career family—active in many fields

Medicinals and preservatives . . . perfumes and plastics . . . these illustrate the wide range of products in which you will find the Salicylates today. In the pharmaceutical and other industries, these versatile chemicals play a multitude of roles.

The Salicylates include some of the best known analgesics and antipyretics in medicine. Acetyl Salicylic Acid is a typical example. Many Salicylates are valuable antiseptics, but the family is active in a variety of other fields as well. Methyl and Ethyl Salicylate are standard flavoring and perfuming agents . . . Sodium Salicylate is used as a preservative as well as a medicinal . . . Salol is employed for enteric coatings and even as a light stabilizer for plastics.

In the long list of Salicylates produced by Dow, one or more may have new potentials for application to your own products. Your inquiries are cordially invited.

Dow Salicylates: Acetyl Salicylic Acid, U.S.P.—Ethyl Salicylate Carbonate—Sodium Salicylate, U.S.P.—Ammonium Salicylate, N.F.—Calcium Salicylate—Magnesium Salicylate—Strontium Salicylate, N.F.—Methyl Salicylate, U.S.P.—Ethyl Salicylate—Salol, U.S.P.—Antipyrine Salicylate—Salicylic Acid, U.S.P. and Tech.—and others.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago
St. Louis • Houston • San Francisco • Los Angeles • Seattle

Pharmaceutical *Chemicals*

DOW

CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY

ADVANCING THERAPY

Ammonia and Dental Caries Immunity

Findings reported by R. G. Kesel, J. F. O'Donnell and E. R. Kirch (*Science* 101:230, 1945) suggest that immunity to tooth decay or dental caries comes from the production of minute but continuous amounts of ammonia in the bacterial plaque resident on the tooth surface; this ammonia apparently being derived from a small group of amino acids. Preliminary experiments have revealed that caries-immune persons have enzyme systems capab'e of converting at least six amino acids into ammonia nitrogen. These six are arginin, alanine, asportic acid, asparagin, glutamic acid and serine. A wide variance of enzyme systems have been found in salivas from persons whose teeth are actively decaying. In most such cases the saliva seems to be lacking an enzyme system that will convert glutomic acid to ammonia.

Sulfadiazine Sensitization Studies

According to M. Siegel (*Am. J. Dis. Children* 68:23, 1944) the questions have been raised whether the repeated administration of sulfonamide drugs in successive infections in the same patient may in some way lessen their therapeutic effectiveness; whether the repeated application of the different derivatives might have a cumulative injurious effect on various organs and tissues, and whether repeated administration might even create in time a sensitized population unable to take the drug safely. To furnish evidence toward the answer to these problems, a number of children with high susceptibility to infections of the respiratory tract were treated exclusively with sulfadiazine; none had received the drug before. Repeated and prolonged application of the drug did not seem to impair the general well-being of the children treated, nor the response to the drug in infections of the respiratory tract. The recognizable toxic effects of sulfadiazine were infrequent. The safety of recurring or prolonged treatments by the administration of this drug under supervision was demonstrated.

Honey as a Topical Medicament

Lacking cod liver oil ointment which he had previously found very effective in the treatment of chronic leg ulcers and small wounds, it occurred to K. L. Yong (*Chinese Med. J.* 62:55, 1944) that honey, which is plentiful in most parts of China, might be employed as a substitute, the rationale of such treatment being that, owing to its high sugar content, it is bacteriostatic; while, owing to its yellow pigment, it might be rich in vitamin A. A honey ointment was made by the addition of 20 per cent of petrolatum. The ointment was first used with encouraging results in leg ulcer. Later when adverse conditions forced another move, petrolatum became unobtainable and lard was used instead. The ointment, composed of 80 per cent honey and 20 per cent lard, was used in 50 cases of chilblain, chilblain ulcers, ordinary ulcers and small wounds. Its success in hastening the subsidence of passive hyperemia and edematous swelling, and in stimulating epithelization and granulation tissue formation, was great. Its application is simple and convenient, and it is not necessary to change the dressings frequently, especially when the lesions are clean and dry.

New Menthol Substitute

A new synthetic, Mentholone, replacing natural menthol at a fraction of its cost is announced by Mann Fine Chemicals, Inc., 136 Liberty Street, New York 6, N. Y. With an odor and cooling effect like that of menthol, about 10 per cent more of Mentholone is required in formulating skin creams, lotions and similar products. It is intended for external use only. Available as white fused crystals, Mentholone has the following physical characteristics:

Melting point:	**35.7° C.**
Boiling point:	**198° C. at 760 mm.**
Spec. gravity:	**0.078 at 40/20° C.**
Solubility:	**Soluble in organic solvents and oils, insoluble in water.**

Penicillin for Resistant Syphilis

In the *American Journal for Syphilis, Gonorrhea and Venereal Diseases* (29:1, 1945) R. A. Nelson and L. Duncan report the immediate results of penicillin treatment of 6 patients with early syphilis resistant to arsenic and bismuth compounds. Each of the patients had early syphilis and in all the cutaneous and genital lesions had shown either progression or failure to heal while under treatment with adequate amounts of trivalent arsenicals, usually combined with bismuth. In general, treatment with penicillin was carried out in a manner similar to that used for patients with early syphilis who had not had previous arsenotherapy. Varying dosage schedules were employed. On the basis of available information, patients with arsenic-bismuth resistant syphilis should receive 2,400,000 units of penicillin intramuscularly in sixty injections of 40,000 units each given every three to four hours day and night. Spirochetes disappeared from all lesions in ten to twenty-six hours after onset of treatment. The cutaneous and genital lesions usually showed prompt healing. Arsenic-bismuth resistant syphilis represents a public health hazard, because these patients are infectious. This infectiousness is quickly controlled by penicillin.

Penicillin Cream for Impetigo

Although the British have been using penicillin creams based on Lanette wax SX for skin diseases, the sodium penicillin cream employed by J. M. Gold (*Brit. Med. J.* 1:152, 1945) is of particular interest because it is made with materials readily available in the United States. The cream employed consisted of equal parts of lanolin, cod liver oil and water, to which was added enough sodium penicillin to make a cream of 500 Oxford units per gram. Employed in the treatment of a rather severe and spreading case of impetigo of the face, the use of the cream resulted in clearing of the lesions in four days. This cream has also been employed with marked success in septic burn cases.

New Antacid: Basic Aluminum Aminoacetate

Having observed the lag in acid absorbing and neutralizing capacities of various samples of aluminum hydroxide gel, J. C. Krantz, Jr., D. V. Kibler and F. K. Bell (*J. Pharmacol. & Exper. Therap.* 82:203, 1944) undertook the search for a more efficient antacid. A new compound, the basic aluminum salt of aminoacetic acid, was found to have the capacity to buffer and neutralize hydrochloric acid. Its prompt and prolonged buffering of acid suggested its use in the treatment of hyperacidity and peptic ulcer. On the basis of the aluminum content, basic aluminum aminoacetate is 42 per cent more efficient in acid consuming power than dried aluminum hydroxide gel. Feeding studies on rats did not result in abnormalities. Basic aluminum aminoacetate was administered to 20 persons in doses of 2 to 4 Gm. in powder form suspended in water. It was tolerated without symptoms. Two patients with active peptic ulcer were treated with the salt as the sole antacid. Healing was observed by the gastroscope and the patients became asymptomatic. In 2 cases of latent peptic ulcer with postprandial distention and hyperacidity prompt and prolonged relief followed ingestion of 0.5 Gm. compressed tablets of the salt. Extensive clinical investigations with the compound are in progress.

Penicillin by Mouth

Although it is known that the various salts of penicillin in aqueous media are rapidly inactivated by gastric acidity after oral administration, it is realized that not all of the penicillin activity is lost in the stomach. Working on the assumption that if penicillin could be protected from the gastric acidity and yet be available for absorption from the small intestine, it could be administered successfully by mouth. R. L. Libby (*Science* 101:178, 1945) undertook a series of tests on dogs and on human subjects. After several unsuccessful trials, suspensions of the sodium and calcium salts of penicillin, 150 to 300 units per mgm., were prepared in cottonseed oil. These suspensions were dispensed in gelatin capsules made up to contain either 10,000, 25,000 or 50,000 units per capsule.

Comparing the results obtained after the oral administration of 90,000 units of penicillin in oil with the blood levels obtained after the intramuscular injection of 20,000 units of an aqueous solution of penicillin, it became apparent that two or three or possibly more injections would be required to maintain a comparable blood concentration over the same period. Although these preliminary studies indicate that a greater amount of penicillin might be required if administered orally than if by intramuscular injection, this increased use is offset by several advantageous factors; among which are the greater ease of administration and the possibility of using less highly purified penicillin preparations.

Following the lead set by Libby's work, W. McDermott and his associates (*Science* 011:229, 1945) investigated the oral administration of penicillin by four methods. From their findings, it appears that penicillin concentrations of approximately the same order of magnitude are attained regardless of whether the penicillin is given in oil, in oil and beeswax, in aqueous solution preceded by a buffer or in aqueous solution alone. However, the height of the serum concentrations at two hours after the ingestion of the oil and oil in beeswax preparations suggests that the duration of penicillin action may be prolonged by the use of these vehicles.

These workers are of the opinion that it is possible to attain serum concentrations of penicillin after oral administration comparable to those attained after intramuscular injection by the use of approximately five times as much penicillin. As the concentrations attained following the ingestion of penicillin by four different methods were all of the same order of magnitude, it appears that the present problem is analogous to that with intramuscular administration, namely, to find the ideal vehicle whereby the duration of the serum concentration can be prolonged.

A clinical investigation of the value of oral penicillin preparations in the treatment of pneumococcus pneumonia is in progress. So far, the results are comparable to those seen following intramuscular injection.

Powdered Blood Cells for Wounds

In reporting a new use for powdered blood cells to stimulate the healing of wounds, T. H. Seldon, J. S. Lundy and R. C. Adams (*Anesthesiology* 5:566, 1944) state that one bottle of the powdered cells was set aside for each patient to avoid cross-contamination. Dressings of the cells were applied every one to three days, the frequency depending on the type of wound. If the wound was moist and there was considerable serum or seropurulent drainage, daily dressings were applied. Cells were applied each time the dressings were changed. Certain wounds had a urea-like odor after application of powdered blood cells. Occasionally during the first five to seven days the application of the powdered blood cells produced a burning and painful sensation. In the first five to seven days there is no appreciable growth of tissue. The time of first growth and of the disappearance of the pain is almost simultaneous. Therefore it is felt that the growth of new tissue may cover the little nerve fibril endings and thus prevent direct stimulation of the nerves. The first few applications of powdered blood cells tend to draw from the underlying tissues a quantity of serum. The cells take up this serum and become moist to a point that a thin gelatinous liquid is present. After five to seven days of treatment there is usually a slow and steady ingrowth of both granulation tissue and epithelium. In some cases the granulation tissue has been so exuberant that it had to be burned down with silver nitrate to allow the epithelium to cover it. The healing of wounds or ulcers has usually required from three to five weeks.

Although dried and powdered blood cells do not always produce healing, these workers found them so satisfactory in a large number of cases that they are to be considered of definite therapeutic value.

Curare in Anesthesia

Good muscular relaxation is one of the prime requirements for efficient abdominal surgery, and in the opinion of H. R. Griffith (*J.A.M.A.* 127:642, 1945), the introduction of curare into medicine has made it possible for surgeons to obtain such complete relaxation at any time during anesthesia with nontoxic, controllable anesthetic agents. Patients given curare, in his practice, have varied in age from 12 to 75 years; the dose being reduced in proportion to the child's weight or to the factors of frailness and asthenia in the aged. There appears to be no doubt that curare works ideally in combination with cyclopropane and, in Griffith's opinion, it may be used safely with other anesthetics, particularly nitrous oxide and ethylene. After two years of careful clinical observation, he has come to the conclusion that curare is a safe drug to use in combination with certain anesthetic agents, provided its administration is under properly controlled conditions. He urgently warns, however, that curare is still a poison and, like every other poison, it should be handled intelligently and only by experienced physicians.

IN THE PALM OF YOUR HAND

With D & O, "at your service" is more than just a hackneyed phrase . . . it's a *fact!*

Whatever perfuming problem confronts you, we are fully prepared to contribute our rich heritage of experience and the valuable services of our highly capable staff of research chemists, so that your problem be promptly and accurately solved.

For over 145 years we have been "at the service" of the entire Industry. Please feel free to call on us!

D&O
ESTABLISHED 1798

Dodge & Olcott Company

180 VARICK STREET, NEW YORK 14, N. Y.

BOSTON · PHILADELPHIA · CHICAGO · ST. LOUIS · LOS ANGELES

Plant and Laboratories: Bayonne, N. J.

Highest Quality
white oils... petrolatum
Made by one of the oldest firms in the business under modern methods with exacting quality control at every step of manufacture, PENN-DRAKE petroleum products measure up to your most exacting requirements of purity, uniformity and dependability.
And if you need products having characteristics that differ slightly from standard classifications—but maintaining highest quality and uniformity—get in touch with PENN-DRAKE!
penn drake
petroleum products
PENNSYLVANIA REFINING COMPANY
GENERAL OFFICES . . . BUTLER, PA.
Makers White Oils (U.S.P. and Technical); Petrolatums (all grades and colors); INSECTI-SOL (deodorized insecticide base); Deodorized and other Naphthas; Petroleum Sulphonates; Waxes; Industrial and Motor Lubricants and Greases; Fuel Oils and other petroleum products.

Hazards of Salicylate Therapy in Rheumatic Fever

Salicylates have long been used in the treatment of rheumatic fever. Physicians are familiar with the astonishing relief the drug gives the stricken child; the antipyretic properties being as striking as are the analgesic effects. Recently, the administration of large doses of salicylates in acute rheumatic fever has been advocated. Commenting on this recommendation, an editorial in the *J.A.M.A.* (127:460, 1945) points out that large amounts of salicylates cannot be given without careful clinical observation of the patient. Deaths and severe complications from salicylates have been recorded. Patients should be questioned concerning any sensitivity to salicylates before the drug is given. The appearance of tinnitus, vertigo, deafness, nausea or other symptoms should indicate the cessation of further administration of the drug. Hypoprothrombinemia has been reported to follow salicylate therapy; some have found that adequate amounts of vitamin K will protect against this contingency.

The editorial stresses that rheumatic fever often is accompanied by a widespread vascular damage, thus increasing the hazards of hemorrhagic complications after salicylate administration. When adequate amounts of vitamin K are given with salicylates, much of the danger of these complications may be prevented. Possible hazards in the administration of salicylates should be remembered, so that unnecessary dangers may be avoided.

DDT vs Head Lice

In a report of comparisons between new and old methods for destroying head lice and their nits, E. B. S. Scobbie (*Brit. Med. J.* 1:409, 1945) states that the ideal substance for treating pediculosis is one which kills all the lice and all the nits immediately, or, failing that, one which kills all the lice immediately and which persists in the hair during the incubation period of the nits so that it kills off the larvae as they hatch out. No drug has been found which will kill all the nits in the hair on one application. It is difficult to apply a substance in sufficient concentration to affect every nit without damaging the scalp or adjacent skin. Two per cent lysol is the agent which is most effective on the nits, and in this concentration is safe to use. Ascabiol (a non-irritating benzyl benzoate emulsion), sassafras oil and carbolic acid (1 in 40) solution come next in order of efficiency, but in practice none of these ovicides gives a 100 per cent kill.

Among the new substances tested, the nearest approach to an ideal is a 2 per cent DDT emulsion which kills all the lice and persists in the hair long enough to kill all the larvae. Lethane has a similar action but does not persist so long, and some larvae which hatch towards the end of the first week after treatment may survive. DDT emulsion has other advantages over lethane hair oil. Its smell, which is not unpleasant, quickly disappears and the hair looks natural after treatment. If desired, the hair can be washed, as DDT is insoluble in water and the washing does not appreciably affect its action. No toxic reaction or irritation of the scalp or skin has been noted after the use of lethane hair oil or of DDT emulsion. These two preparations stand out as insecticides of value in the treatment of pediculosis capitis.

Sulfonamides for Industrial Injuries

R. H. Aldrich, A. R. Savina and R. O. Walsh (*Indust. Med.* 13:693, 1944) have found that infection following injury is a real problem in industry and view the local application of sulfonamide drugs as a help in cutting down the disabling and time-consuming effects of infection. In a series of 846 unselected cases it was found that local sulfonamide therapy when used with caution was a valuable addition to the armamentarium for combating infections following injuries. It was emphasized that for best results careful debridement and gentle cleaning must be done because it has been definitely established that the sulfonamide drugs do not function effectively in the presence of para-aminobenzoic acid or the protein-breakdown products found in pus and exudates. A combination of sulfanilamide and sulfathiazole suspended in an oil-in-water emulsion base with a wetting agent was found to be the most effective local treatment which was used. These local sulfonamides were administered for a period of from 5 to 7 days.

Ficin, a New Anticoagulant

The latex of the Brazilian tree, Ficus glabrata H.B.K., inhibits the coagulation of blood *in vitro*, reports J. R. Cancado (*Rev. brasil. biol.* 43: 349, 1944, through *Chem. Abstr.* 39: *984*, 1945). It is suggested that its proteolytic enzyme, ficin, destroys the prothrombase, essential in the blood coagulating mechanism. Latexes of other members of the *Ficus* group do not have this property.

Vitamin D in Rickets Prevention

Writing in the *British Medical Journal* (1:78, 1945), D. Krestin reports that the prophylaxis of rickets by means of a single massive dose of vitamin D_3 (calciferol), dissolved in 1 cc. of peanut oil, given by mouth was investigated during a period of six months of the autumn, winter, and early spring in 137 infants under 3 years and the results compared with controls who received no vitamin D preparation and infants who received daily doses of the Ministry of Food cod-liver oil. Of 93 infants under 2 years who received one dose of 7.5 mg. (300,000 i.u.) 90 remained free from the disease throughout the period of observation.

It is suggested that when a child first comes under observation in the late winter or apring—i.e., after the beginning of March—one dose of 7.5 mg. is probably sufficient. If first seen before this time, it would probably be wise to repeat the dose after 3 months. Premature infants, those taking thyroid, and those growing rapidly after marasmus or an acute illness may require double the above doses, possibly repeated at shorter intervals.

The advantages of a single massive dose are many. Most important is the fact that the child can be given one dose and then need not be treated again for two or three months. In addition, a considerable quantity of oil is saved, which in addition to being economical, may be a factor of importance in wartime. The treatment, moreover, remains largely independent of the mother and daily-dose methods. This last is especially valuable for those liable to gastro-intestinal disturbances or otherwise unable to take oily preparations daily.

Sulfapyridine as a Hemostatic Agent

Following a suggestion made in 1942 that sulfapyridine may be used as a hemostatic agent, C. R. Anderson decided to use the powdered sulfa drug locally in the treatment of a number of diseases. Reporting his experiences in the *Archives of Dermatology and Syphilology* (51:138, 1945), he states that the local application of sulfapyridine powder to wounds after removal of lesions by electrodesiccation, cutting current or cautery is especially useful in producing hemostasis. The surface of the wounds becomes hard and dry, and the wounds heal without infection. The use of sulfapyridine powder is superior to a solution of gentian violet medicinal, which is often used. In his opinion, the local application of sulfapyridine powder to produce hemostasis deserves wider use.

WE SPECIALIZE IN SUPPLYING

HORMONES

in bulk to the ethical,
pharmaceutical and
cosmetic trades.

Technical advice on
application, incorporation,
usage, etc.

INTRAMED CO., INC.
1860 BROADWAY, NEW YORK 23, N. Y.

Copyright 1942 California Fruit Growers Exchange, Products Dept.

NATURAL ABYSSINIAN CIVET

HIGHEST
QUALITY

IN
ORIGINAL
HORNS

Samples
and quotations
on request

J. C. Andresen
132 Nassau St. New York, N. Y.
Phone: BEekman 3-4700

Pharmaceuticals

CALCIUM LEVULINATE

Calcium Iodobehenate, U.S.P.

Tannigen U.S.P. • Tannalbin U.S.P.

Calcium Camphosulphonate and other salts

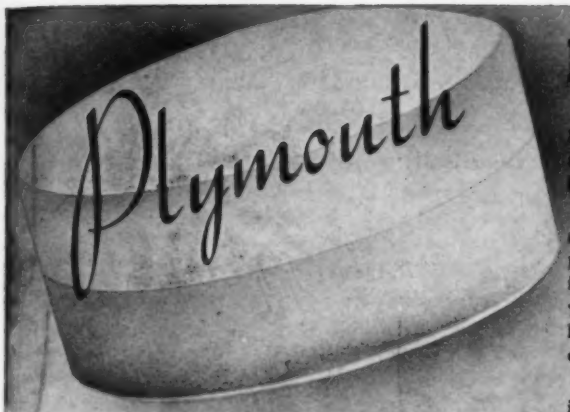
Antipyrine Salicylate (pure)

Helmitol • Phenetsal

ALSO: Special products manufactured with your confidential process or with processes developed by us for you.

Write for comprehensive list of organic chemicals of our manufacture. Consult us on your special requirements.

FINE ORGANICS, INC.
Manufacturing Chemists
Executive Office: 211 East 19th St., New York 3, N. Y.
Gramercy 5-1030



POWDER BASE NO. 7

Since the introduction of this new face powder material sales of it have constantly increased because the use of it actually represents a development in fine face powders.

Its exceptional silky, soft, smoothness, the complete absence of odor and the extremely fine particle size of it, plus its extraordinary adhesiveness actually improves a face powder in which it is used. As little as 5% added to your formula will bring about this result although it is being used in some face powder to the extent of 15%, and a formula is offered showing its use in this percentage.

Samples are at your disposal and we believe that this is one of the Plymouth products which warrants a serious investigation by every face powder manufacturer because it has real merit and will improve your product.

A COMPLETE LINE OF COSMETIC RAW MATERIALS

PLYMOUTH

M. W. PARSONS

59 BEEKMAN STREET
NEW YORK, N. Y., U. S. A.

Imports AND
PLYMOUTH ORGANIC LABORATORIES, Inc.

TELEPHONE: BEEKMAN 3-3162 — 3163 — 3164
CABLE ADDRESS: PARSONOILS, NEW YORK

Mantrose

Quality

BLEACHED SHELLAC

Refined — Regular — Arsenic and Rosin Free

AVAILABLE FOR ALL PURPOSES
PRE WAR STANDARDS FULLY MAINTAINED
NO PRIORITIES NECESSARY

Your Inquiries Solicited

THE MANTROSE CORPORATION

IMPORTERS **BLEACHERS** **MANUFACTURERS**

136-41st Street — Brooklyn 32, N. Y.

Agents in Principal Cities

Boston, Mass.—M. F. Robie
Rochester, N. Y.—J. E. McManus
Los Angeles, Calif.—Pitts & Loughlin
Philadelphia, Pa.—Frances Patterson
Chicago, Ill.—Harry Holland & Son, Inc.
Baltimore, Md.—William McGill
Cleveland, Ohio—J. H. Hinz Company
St. Louis, Mo.—Phil A. Sullivan Sales Co.
San Francisco, Calif.—E. M. Walls
Danbury, Conn.—J. E. Pike
Canada—Harrisons & Crosfield, Ltd.
Montreal, Toronto and Vancouver

Have You Tested

VORAC'S NEW NAIL POLISH

Vorac, first again to incorporate into nail polish formulation remarkable new materials developed by famous research laboratories, gives you a Nail Polish greatly improved in wearing quality, application and appearance.

Make a consumers comparative test with Vorac. It will be revealing.

Write for your samples.

Nail Polish Specialists
Exclusively for the trade

THE VORAC COMPANY
147 Meadow Road Rutherford, N. J.
Tel: Rutherford 2-0934-5
St. Louis, Mo. - 1338 So. Kingshighway

Made from the world's finest crude beeswax.

Chemically tested for quality and purity

Bleached by sun and air—nature's own method.

BEEHIVE BRAND Beeswax

And because of its superior quality you can use less and still get a finer finished product. Guaranteed pure . . . guaranteed always the same.

WILL & BAUMER CANDLE CO., INC.
Established 1855
SYRACUSE, NEW YORK
Spermaceti Ceresine Red Oil Yellow Beeswax
Composition Waxes Stearic Acid Hydistear

FOUNDED T & B 1856
The Symbol of Standardization

GUMS
ARABIC
TRAGACANTH
KARAYA

WHOLE GUM—Cleaned and repacked before shipment.

POWDERED GRADES—Standardized by milling under strict laboratory control.

GRAIN GUMS—Graded to uniformity and standardized.

T & B STANDARDIZED GUMS are your best protection against production difficulties.

All Powdered Gums Standardized by Laboratory Control

THURSTON & BRAIDICH
286 Spring Street New York 13
Represented in Chicago by A. C. Drury & Co., Inc.

REPLACEMENTS

For
AROMATIC CHEMICALS
ESSENTIAL SPICE
and
FLOWER OILS

•

SOAP PERFUMES
ODOR MASKS

SEELEY & CO.
136 LIBERTY STREET NEW YORK 6, N.Y.
FACTORIES
FARMINGDALE, L. I., N. Y. NYACK, N. Y.

Industry's Books

Bacteriology and Allied Subjects, by Louis Gershenfeld, B.Sc., Ph.M., D.Sc., Professor of Bacteriology and Hygiene and Director of the Bacteriological Laboratories at the Philadelphia College of Pharmacy and Science, 561 pp., Mack Publishing Co. $6.

Included in this work are the latest advances in the study of bacteria, rickettsiae, viruses, and diseases of unknown, doubtful, or indefinitely determined etiology and subjects pertaining to them. Sterilization, disinfection, fumigation, ultraviolet irradiation and disinfectants as well as practical procedures employed for the sterilization of material are thoroughly discussed and presented in a detailed consideration. Chemotherapeutic and antibiotic agents, bacteriotherapy and phagotherapy and the preparation of ampuls and other sterile medicaments are presented in expanded chapters. With the war focussing attention on allied subjects, sections have been included on protozoa, metazoa, insects and other arthropods, insect control and insecticides. New material has been added on biological products, biological tests and immunity. Several chapters on applied bacteriology with detailed techniques as used in the examination of materials are included. A complete and comprehensive index makes this book a useful and convenient reference work.

Essentials of Allergy, by Leo H. Criep, M.D., Assistant Professor of Medicine and Lecturer in Immunology, School of Medicine, University of Pittsburgh, 381 pp., Illus., J. B. Lippincott Co., Phila., $5.

In the past decade there have been tremendous advances in clinical allergy. Starting as a purely speculative study, this branch of internal medicine has earned a permanent place in the family of medical specialties. "Essentials of Allergy" is a concise, complete handbook, designed as a working manual for the practicing physician, and covering all aspects of classification, etiology, diagnosis, prognosis and treatment. Based upon his long experience in research and clinical allergy, Dr. Criep has presented the existing knowledge of allergy with clarity and precision.

International Tribunals, Past and Future, by Manley O. Hudson, Judge of the Permanent Court of International Justice, Member of the Permanent Court of Arbitration, 287 pp., Carnegie Endowment for International Peace and Brookings Institution, Washington, $2.50.

In this volume, the leading American authority on the subject of an international court of justice, supplies possible solutions for the juridicial problems raised but not decided by the Dumbarton Oaks proposals. Out of a ripe scholarship fortified by a rich experience, Judge Hudson first surveys the history of one hundred and fifty years of experience—from the Jay Treaty of 1794 down to 1944. He then analyzes the various problems which arise in connection with the creation and functioning of both permanent and temporary international tribunals. The volume may serve all those who are considering either the future of existing institutions such as the World Court and the old Hague Court, or the merits of such proposals as those for an International Criminal Court or an International American Court of Justice.

Manual of Clinical Mycology, Prepared under the auspices of the Division of Medical Sciences of the National Research Council, 348 pp., Illus., W. B. Saunders Co., Phila.

This volume is one of a series developed under the auspices of the Division of Medical Sciences of the National Research Council to furnish the medical departments of the United States Army and Navy with compact presentations of necessary information in the field of military medicine. Knowledge of fungus infections is of particular importance to medical officers in this war because thousands of men in the Armed Forces are engaged in the field in tropical regions in which mycotic infections are frequent. This Manual presents clearcut clinical descriptions. It clears up confusions in nomenclature and differential diagnosis of the mycotic diseases. It also presents simplified and workable classifications and methods.

Flavor, by E. C. Crocker, 172 pp., Illus. McGraw-Hill Book Co., New York, $2.50.

This is the first comprehensive treatment of the whole subject of flavor—a convenient reference source of information on any aspect of odor and taste. It contains a philosophy of flavor perception, the chemistry of flavoring agents and condiments and methods for developing and retaining flavor in processed foods and other products as well as methods for detection, correction and prevention of undesirable or "off" flavors in commercial products. The book gives an odor classification system, for indicating the relative concentration of the four types of odor components, and contains a new and enlarged table of volatile chemicals used in flavoring, arranged in fourteen classes according to their volatility.

The Chemistry And Pharmacy Of Vegetable Drugs, by Noel L. Allport, F.I.C., Research Chemist, The British Drug Houses Ltd., 252 pp., Illus., Chemical Publishing Co., Brooklyn, $4.75.

This book deals with the derivation and properties of all the principal vegetable drugs. The author has used a special system in grouping the various drugs so that the reader will be able to ascertain the relative value of drugs of secondary importance as compared with the more important ones.

Yellow Magic—The Story of Penicillin, by J. D. Ratcliff, 173 pp., Random House, New York, $2.

This is the first comprehensive story of penicillin. It covers the accidental discovery of penicillin, the incredible labor that went into extracting from mold the first minute doses and the dramatic clinical tests on people who were going to die—but didn't die if the meager supply of penicillin held out. However, its commercial manufacture was extraordinarily complicated. To save the lives of wounded soldiers, drug manufacturers were faced with the necessity of stepping up production almost overnight to fantastic peaks. How they responded to the challenge is in itself an epic story. As a result of their efforts, penicillin is now available in quantities sufficient to meet all demands.

Manufacturers of

CHOLESTEROL ABSORPTION BASES

★ AMERCHOL ★

for PHARMACEUTICAL and COSMETIC preparations

Our Absorption Bases possess inherent emollient and absorption properties because of their high free Cholesterol content.

- Facilitate the penetration and absorption of incorporated therapeutic agents.
- Recommended for ease of emulsification.
- Absorb unusually large amounts of water.
- Form pure white water-in-oil emulsions, completely stable under widely varied conditions.
- Form elegant products of rich texture and consistency.

We also manufacture—

Cholesterol C.P., Emulsifiers, Ointment Bases, Industrial Penetrants, Softening and Dispersing Agents,

and other AMERCHOL Products.

AMERCHOL products are manufactured from specially processed Cholesterol and other sterols.

- Will not oxidize, nor turn rancid.
- Are unaffected by electrolytes.
- Retain their properties at extreme temperatures.
- Are for neutral, acid and alkaline creams, ointments and lotions.

American Cholesterol Products
Incorporated
MILLTOWN, NEW JERSEY
Sales Office—40 Exchange Place—New York 5, N. Y.

QUALITY RAW MATERIALS

Our complete stocks guarantee that you can obtain the exact grade and quality for your requirements without delay.

BEESWAX, sunbleached and yellow
Refined U.S.P.

TRAGACANTH GUM, all grades

KARAYA GUM, all grades

STEARIC ACID, fancy triple pressed

QUINCE SEED, Persian, recleaned

also

SPERMACETI WAX CERESIN WAX
CAMPHOR

and all other cosmetic raw materials. Samples on request.

Write for latest stock list

WALTER H. JELLY & CO.
INCORPORATED
412 N. Western Avenue Chicago, Illinois

AGAGEL AND ALGALOID

(PURE EXTRACTIVES OF IRISH MOSS)

POTENT NATURAL COLLOIDS
COMPLETELY SOLUBLE-NEUTRAL

For

Emulsions — Stabilizing
Suspensions — Gel-Formation
Viscosity Control — Mineral Nutrition
Binder — Moisture Retention
Bacteriological Media

T. M. DUCHÉ and SONS, INC.
117-119 HUDSON ST., NEW YORK 13

BOSTON 177 State | CHICAGO 61 W. Kinzie | CLEVELAND 16304 LaVerne Ave. | ST. LOUIS 2115 Pine

R.W. Greeff & Co. Inc. RWG New York, U.S.A.

INDUSTRIAL AND PHARMACEUTICAL *Chemicals*

ASEPTOFORM

Para Hydroxy Benzoates
(Methyl, Butyl and Propyl)

Effective preservatives
for creams and lotions

R.W. GREEFF & CO.
10 ROCKEFELLER PLAZA NEW YORK CITY
TRIBUNE TOWER CHICAGO, ILL.

CHEMOSOL

IS A UNIQUE

SOLUBLE

AND APPROVED

PRESERVATIVE

FOR DRUGS AND

COSMETICS

SAMPLES AVAILABLE

CHEMO PURO

48th Ave. & 5th St. • Long Island City • New York

NO SUBSTITUTES NECESSARY!
The best is still available—
HOPKINS' EGYPTIAN HENNA

Not once since the start of the war have we let hairdressers run short of the best Henna in the world — HOPKINS' EGYPTIAN HENNA. You need no substitutes—in fact, there is no substitute for HOPKINS' EGYPTIAN HENNA. Without guesswork, without predisposition tests, HOPKINS' EGYPTIAN HENNA gives you always the uniform, even shade your patron wants. Contains no chemicals or dyes of any kind. Order from any reputable wholesaler

There is no shortage of HOPKINS' EGYPTIAN HENNA
If you have any difficulty in supplying your regular needs of HOPKINS' EGYPTIAN HENNA, please let us know promptly. We will put you in touch with a reputable distributor in your locality.

J. L. HOPKINS & CO.

220 BROADWAY : : : NEW YORK

EDW. S. BURKE
J. F. HOLLYWOOD

Representing:

CARUS CHEMICAL CO., INC.

BENZOIC ACID U.S.P.
SODIUM BENZOATE U.S.P.
HYDROQUINONE
MANGANESE SULFATE
POTASSIUM PERMANGANATE
RARER PERMANGANATES

BENZOL PRODUCTS CO.

AMINOACETIC ACID (Glycocoll)
AMINOPHYLLINE U.S.P.
BENZOCAINE U.S.P.
CHINIOFON (Yatren) U.S.P.
CHLORBUTANOL U.S.P.
CINCHOPHEN & SALTS N.F.
IODOXYQUINOLIN SULPHONIC ACID
NEO CINCHOPHEN U.S.P.
OXYQUINOLIN BENZOATE
OXYQUINOLIN SULPHATE
POTASSIUM OXYQUINOLIN SULPHATE
PHENOBARBITAL U.S.P. & SALTS
TETRA-IODO-PHENOLPHTHALEIN SODIUM U.S.P.
THEOPHYLLINE U.S.P.
DIACETYL
PHENYL ACETIC ACID
BENZALDEHYDE
BENZYL ALCOHOL
BENZYL CHLORIDE
BENZYL CYANIDE
DIETHYL MALONATE
DIMETHYL UREA
CYANOACETAMIDE
CYANO ACETIC ACID
ETHYL CYANO ACETATE
8-HYDROXYQUINOLIN
8-HYDROXYQUINOLIN-5-SULPHONIC ACID

EDW. S. BURKE

Established 1917

65 PINE STREET • NEW YORK 5, N. Y.

GUMS

ARABIC-Sorts, Granular, Powder
KARAYA-Powder
LOCUST BEAN-Powder
TRAGACANTH-All Grades. Whole, Granular, Powder

GELLOID

(Pure Calcium Carragheen Sulfate)
Binder in Tablet Making
Moisture Retention in Dentifrices

JACQUES WOLF & CO.

Manufacturing Chemists and Importers
PASSAIC, N. J.

California Branch--339 East 2nd Street
LOS ANGELES, CALIF.

Perfumer's Shelf

Selective Formylation in Analysis

In continued discussions on volatile plant substances, Y. R. Naves (*Helv. Chim. Acta.* 27:942, 1944) reports that the formylation method of Simmons was found suitable for the determination of borneol and 3-octanol in many essential oils, including those containing linalool and its esters. However, it is not suitable for mixtures containing benzyl alcohol or benzyl acetate since some of the benzyl formate formed is lost because of its solubility in the sodium chloride brine used for washing the excess of formic acid out of the reaction mixture. Better results are obtained with 90 per cent formic acid than with 86 or 98 per cent.

Russian Patents

News of Russian processes, though delayed, are beginning to trickle into this country. The following two patents, reported in a recent issue of *Chemical Abstracts*, should be of interest to perfumers.

The first, Russian Patent 59,004, granted to V. I. Lynbomilov and associates, describes the preparation of camphene. In this method the camphene is made by isomerizing pinene at elevated temperatures and in the presence of a catalyst, such as activated clay. Then an additional amount of the same or another catalyst is introduced and the temperature increased to polymerize admixtures in the camphene. The camphene is separated in the usual manner.

The second, Russian Patent 59,848, granted to V. I. Nilov, describes the recovery of phenols from essential oils. In this process, essential oils are steam-distilled, and the vapors are treated with alkali.

Essential Oil of Guayule

A. J. Haagen-Smit and R. Sin undertook an investigation of the essential oil of the guayule rubber plant (*Parthenium Argentum*, Gray) because the meager chemical knowledge available could not furnish a sound basis for the understanding of the injurious effects of the oil on rubber, of it' role in the plant, and of its possibilities as a by-product in the guayule rubber industry.

In their paper in the *Journal of the American Chemical Society* (66:2068, 1944) they report that the leaves contain the highest essential oil content on the fresh weight basis (1.04%), followed next by the flowers (0.75%), then the bark (0.24%), and finally the wood (0.11%). The average yield for the whole plant is 0.45%. When the entire guayule plant was steam distilled, the oil separating from the steam distillate was light yellow in color. It was slightly *levo*-rotatory and contained only a small amount of acids and saponifiable matter.

The oil was separated by distillation into 45 fractions, and in this way could be divided into 5 large groups, *viz.*: 72.6% terpenes, 5.8% oxygenated terpenes, 9.3% sesquiterpenes, 6.3% oxygenated sesquiterpenes, and 5.9% residue.

The following compounds were identified and their approximate amounts in the oil are listed: 60%, α-pinene; 9%, dipentene; 8%, cadinene; 6%, di-, tri- and higher terpenaceous compounds; 4%, elemol-like sesquiterpene alcohol; 4%, phellandral (probably); 3%, sesquiterpene alcohol with an azulene nucleus; 2%, guajene-like sesquiterpene; 2%, terpene ketone or aldehyde; 2%, β-pinene and small amounts of an easily oxidizable terpene.

Perfume Oils from the Near East

In a discussion of essential oils and other perfume raw materials obtained from the Near East, M. D. Hall, in *Domestic Commerce* for January 6, 1945, observes that probably the best known aromatic ingredients obtained from Arabia is the true myrrh, or herabol myrrh, a gum resin, having a bitter, slightly pungent taste. It is derived from several species of *Commiphora* which are found on the shores of the Red Sea. Oil of myrrh is a viscous liquid, yellowish-brown or greenish in color, and is produced by distillation of the gum. Modern perfumers find the heavy balsamic odor of oil of myrrh an excellent constituent of oriental composition, blending effectively with opopanax, sandalwood, vetiver, patchouli, and geranium. Traces of the oil provide a pleasing addition to the light broom and honeysuckle floral attars.

Another important aromatic substance from the Arabian peninsula is opopanax oil. The opopanax formerly on the market was the resin of the plant *Opopanax chironium*, related to the lowly parsnip, and native to the warm climate of the Levant. The type of opopanax now familiar to commerce is the sun-dried juice given off by the bark of *Commiphora erythraea*, variety, *glabrescens* Engler. The finest oil is obtained by steam distillation. In the Far East the gum is used as an ingredient in incense; in the West, as an element in perfumes. The balsamic odor of opopanax oil harmonizes with myrrh, olibanum, sandalwood, vetiver, and patchouli, to produce various exotic oriental bouquets. Lovely floral attars may be prepared by blending oil of opopanax with bergamot, geranium, jasmine, rose, and cassie.

Gum olibanum, the frankincense of ancient times, is obtained from a number of special of Boswelia, which grow in southeastern Arabia. Incisions in the bark of these trees produce the discharge of a white substance that hardens into yellowish drops of gum which fall to the ground. Oil of olibanum is produced by distillation of this resin. Much of the gum of olibanum is shipped to Bombay, India, where it is reexported to all parts of the world, including the United States. Oil of olibanum is employed in expensive perfumes, particularly those of the heavy oriental variety. Application of this oil in traces has given exquisite qualities to some famous French perfumes.

Asia Minor has long been a source of aromatic gums and plants, among them storax (liquid ambar, or sweet gum), a familiar element in perfumes. Storax is a gum produced by the tree of the genus *Styrax* when its sapwood is peeled off. The Asiatic storax, *Liquid ambar orientalis*, Miller, grows profusely in southwestern Turkey. One of the many uses of purified storax is to perfume soaps and cosmetics. Choice floral attar are created by compounding this balsam with such odors as hawthorn, hyacinth, lavender, or verbena.

As a source of rose oil, Turkey is second only to Bulgaria. Genuine rose oil, now used only in high-grade perfumes, cosmetics, and toilet waters, can be successfully compounded with almost every kind of floral bouquet. Synthetic rose oils have found extensive use in the less-

HERE ARE OUR PRODUCTS . . . . *and* SOME OF OUR FACILITIES . .

ESSENTIAL OILS

TERPENELESS and SESQUITERPENELESS OILS

CITRUS CONCENTRATES

AROMATIC CHEMICALS

AMYL and ETHYL ETHERS

NATURAL FLOWER OILS

FLORAL ABSOLUTES, CONCRETES and ABSOLUTE COMPOSITES

SYNTHETIC FLOWER SPECIALTIES

RESINOIDS and ANIMAL FIXATIVES

PERFUMERS' TINCTURES

WATER MISCIBLE PERFUME BASES

FLORAL WATERS

SPECIAL PERFUME COMPOUNDS for ALCOHOLIC EXTRACTS, CREAMS, LOTIONS, POWDERS and MISCELLANEOUS COSMETIC PREPARATIONS; for COLOGNES and TOILET WATERS, HAIR PREPARATIONS, BATH SALTS, TOILET SOAPS, LIQUID SOAPS, SHAMPOOS, etc.

DEODORIZING COMPOUNDS and MASKING PERFUMES for ALL TECHNICAL PURPOSES

ANTI-OXIDANTS

Also:

FLAVORS and FLAVORING OILS for CONFECTIONS, SOFT DRINKS, ALCOHOLIC LIQUORS, FOOD PREPARATIONS, etc.; OLEORESINS, ESSENCES and SPECIALTIES for PHARMACEUTICAL PREPARATIONS, DENTAL PASTES and POWDERS, MOUTH WASHES, etc.

Photos, top to bottom:
Receiving Department.
Smelling booth for study of odors.
Sub-Division Laboratory.
Spacious truck pit twelve floors above street level.

New offi
Clift
Perfume
Meticulo

FRITZSCHE BROTHERS, Inc.

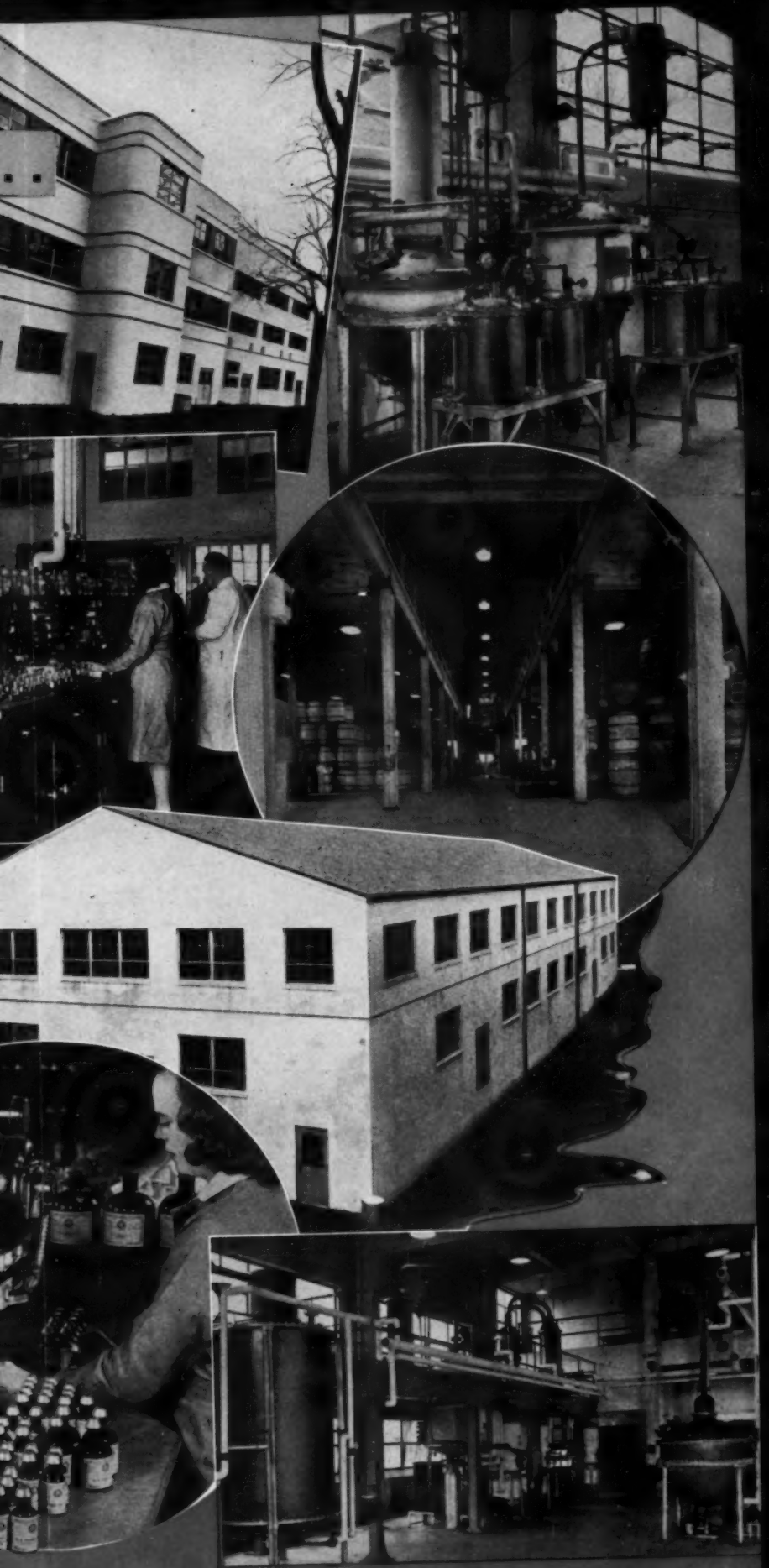
PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK 11, N.Y.

BRANCH STOCKS

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.

FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

Photos, top to bottom:
Receiving Department.
Smelling booth for study of odors.
Sub-Division Laboratory.
Spacious truck pit twelve floors above street level.
New office, distillery an
Clifton, N. J., plan
Perfume Laboratory.
Meticulous, attractive



ew office, distillery and laboratory building.
Clifton, N. J., plant.
erfume Laboratory.
eticulous, attractive packaging.

A group of stills.
Interior of new warehouse at Clifton.
Exterior view of warehouse.
Interior of still room.

What DO YOU SEEK in the PRODUCTS YOU BUY?

Is it **LOW PRICE?**

Is it **HIGH QUALITY?**

Is it **UNIFORMITY and DEPENDABILITY?**

Is it **ALL-AROUND GOOD VALUE?**

Is it **SELECTABILITY?**

Is it **METICULOUS PACKAGING?**

Is it **PROMPT FILLING OF ORDERS?**

Is it **HELPFUL SERVICE?**

Is it **COMPLETE CONFIDENCE IN THE REPUTATION, EXPERIENCE and FACILITIES OF YOUR SUPPLIER?**

If any one or *ALL* of these considerations influence your purchases of Perfumers' Specialties, Essential Oils, Aromatics, Synthetics or Flavors, then you have every reason to think seriously of making FRITZSCHE BROTHERS, Inc., your major source of supply. Our *unmatched* facilities, both in plant and personnel, are your best guarantees of dependable, fair-priced products . . .

FRITZSCHE BROTHERS, Inc.

Photos, top to bottom:

Chicago Office
Los Angeles Office
St. Louis Office
Boston Office

EST. 1871

BRANCH OFFICES

ATLANTA 3, GA., 1004 William-Oliver Bldg.
CINCINNATI 2, OHIO, 2306 Carew Tower
CLEVELAND 13, OHIO, 1104 Standard Bldg.
PHILADELPHIA 7, PA., 12 South 12th Street
SAN FRANCISCO 5, CAL., 627 Rialto Bldg.

BRANCH OFFICES & STOCKS

BOSTON 9, MASS., 206 State Street
CHICAGO 10, ILL., 118 West Ohio Street
LOS ANGELES 14, CAL., 816 West 8th Street
ST. LOUIS 2, MO., 308 South 4th Street

FRITZSCHE BROTHERS OF CANADA, LTD.
77-79 Jarvis Street, TORONTO, CANADA

PRODUCTOS FRITZSCHE BROTHERS, S. A.
Mesones 24, MEXICO, D. F.

FACTORIES

CLIFTON, N. J., and SEILLANS (VAR) FRANCE
Telegraph and Cable Address
CABLE: Fritzbro CODES: All codes; private

FRITZSCHE BROTHERS, Inc.

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK 11, N.Y.

expensive perfumes. The synthetics usually combine true oil of the rose with citronellol, geraniol, phenylethyl alcohol, and other ingredients.

Both Palestine and Syria produce origanum oil, distilled from the flowering herb, *Coridothymus capitatus*, which is indigenous to the Mediterranean area. There are some variations in the oil, depending upon geographical locations. The principal use of origanum oil is to scent soaps; to a lesser extent it serves as an ingredient in perfumes.

Asia Minor, particularly Syria, is one of several regions where cumin (*Cuminum cyminum*, Linné) flourishes. From the seed of the cumin, perfumers obtain an oil useful in scenting soaps and perfumes. There are other oils produced in Asis Minor, especially floral essences such as jasmine, cassie, geranium, and neroli, but at present these are only of local interest.

Today, aromatic oils are not produced in Egypt on a large scale. However, acreage devoted to raising cassie ancienne (*Acacia farnesiana*) has been increased tremendously during the past decade, chiefly because modern irrigation has made possible the cultivation of areas far distant from the Nile River.

According to Hall, trade in some of the aromatic oils from Arabia, Asia Minor, and Egypt has been disrupted because of wartime shipping difficulties. Other oils are losing their place to synthetic products. However, should postwar demand increase sufficiently, various unexploited sources of natural essential oils could be utilized to good advantage.

American Oakmoss

In a report given at the Conference on the Cultivation of Drug and Associated Plants in California, E. C. Kunz, president of Givaudan-Delawanna, Inc., New York, stated that among the many essential oils and perfume raw materials for which industry would welcome discoveries of new domestic sources, the plant that has come to be known as oakmoss stands in a unique position. While the development of American jasmin or geranium or lavender would require a study of climatic and soil conditions, extremely careful cultivation, months and perhaps years of testing, a rather large capital investment with doubtful returns, oakmoss, growing wild and in abundance, is waiting to be found, collected and used. It would require neither gardening nor caretaking, neither investment of land nor of labor.

Oakmoss is not a moss, but a lichen, and does not necessarily grow on or around the oak tree. From certain species of lichens, the chemist extracts a viscous, liquidy substance which he calls "oleoresin oakmoss" and which is used in perfumery as a base both for its strong, lasting "greeny" note and as a fixative. In former years, the American perfume industry depended largely on Jugoslavia for its oakmoss. To a lesser degree, France was also a supplier, with a small amount coming from Portugal and elsewhere, and with considerable experimentation going on in the Soviet Union in search of oakmoss, but apparently without commercial results.

Since the outbreak of the war in Europe, experiments were conducted with several dozen different lichen specimens. They have included at least four different *Evernias*, as well as lichens of the genera *Ramalina*, *Cladonia*, *Umbilicaria*, *Lobaria*, *Cetraria*, *Parmelia* and others. While in many cases the quantitative yields of these latter genera were rather encouraging, it was the unanimous opinion of both perfumers and chemists that only the *Evernias* have a satisfactory oakmoss note. The other species yielded resins varying in odor type from "green" to "fishy," and were unsatisfactory for any possible use in perfumery.

From the point of view of quality of odor obtained, the most satisfactory of the domestic samples was *Evernia vulpina*, a specimen of which was obtained in Oregon. While its odor is still considerably inferior to that of the Jugoslav oakmoss, and particularly lacks its odor intensity, it would be usable as a substitute during the period of the war, if it could be found somewhere in great abundance and could be collected at a cost warranting its commercial exploitation.

This *Evernia vulpina* was separately studied in its fruiting and nonfruiting stage, and it was found that whereas the nonfruiting lichen gave a yield of 1.96%, the flowering plant yielded only 0.83%.

Experiments were also conducted to determine whether the ageing of the lichen increased its yield. It was found that the nonfruiting *E. vulpina*, which had given 1.96% in September, 1941, gave 1.88% in December, 1941. Similar experiments on other lichens which had given less promising yields failed to substantiate the theory that the ageing of the moss improved the yield.

In addition to the odor differences between the imported and the domestic resins, there was also observed a noticeable difference in color. Most of the resins obtained from the domestic lichens resembled semi-solid pitches, varying in color from brownish green to black tars. None approached the dark green color of the true "Oak Moss" resin.

Furthermore, the alcohol-treated resin from *Evernia vulpina* was a clear brown, and dissolved in alcohol to give a yellow-green solution. During the alcohol purification of the *Evernia vulpina* resin, yellow crystals separated which were found to be related chemically to the "Oak Moss" crystals similarly obtained from the Jugoslav lichen, but were not identical with them.

A final but a most important difference was found in the properties of the majority of the domestic resins, which were such as to preclude their adaptability to large scale manufacture. Without going into a thorough description of the nature of these properties, it will suffice to state that the exceptions to this included the *Evernias*, and particularly the *Evernia vulpina*.

These studies, though only scratching the surface, would seem to substantiate the literature of perfumery insofar as the greatest hope for obtaining oleoresin oakmoss lies in the *Evernia* lichens. It would also indicate that there are lichens in this country which would serve as a satisfactory substitute for Jugoslav oakmoss during the period of the war; it is merely necessary to locate them where they are abundantly available.

Azulene Content of Chamomile

In discussing the azulene content of chamomile flowers and of preparations made from them, K. Koch (*Arch. Pharm.* 280:424, 1942, through *Chem. Abstr.* 39:1249, 1945) points out that the plant does not contain the azulene in free form but as a precursor. This precursor is colorless or yellowish, easily soluble in chloroform, ether, methyl alcohol and ethyl alcohol, also in warm water, but hardly soluble in petroleum ether. It is stable with ammonia but is decomposed in an acid medium, forming azulene. The azulene content of ten samples of German chamomile varied from 31.9 to 112 mg. per 100 Gm., with an average of 64.5 mg. The content decreases during storage. Infusions with water contain only 0.2 to 0.6 mg. per 100 cc. and even this is soon decomposed on storage. The same was found with most other solvents. The best liquid for extraction is 45 per cent ethyl alcohol containing 2 per cent ammonia. This extract is fairly stable.

GUMS Chemicals and Oils

(CRUDE, POWDERED)

REPRESENTATIVES:

CHICAGO:
CLARENCE MORGAN, INC.

BOSTON:
P. A. HOUGHTON, INC.

PHILADELPHIA:
R. PELTZ & CO.

ST. LOUIS:
H. A. BAUMSTARK & CO.

GUMS:

GUM ARABIC
GUM ARABIC BLEACHED
GUM GHATTI
GUM KARAYA (Indian)
GUM TRAGACANTH
GUM EGYPTIAN
GUM LOCUST (Carob Flour)
QUINCE SEED

SPECIALTIES:

MENTHOL (Crystals)
PEPPERMINT OIL
TARTARIC ACID
CREAM OF TARTAR
GLUCOSE (U.S.P.)
COUMARIN

EGG ALBUMEN
EGG YOLK
BLOOD ALBUMEN
JAPAN WAX (Special)
CANDELILLA WAX
CASEIN

PAUL A. DUNKEL & CO., Inc.,

1 WALL STREET
NEW YORK 5, N.Y.
Hanover 2-3750

IMPORTERS AND EXPORTERS

CHICAGO: 919 N. MICHIGAN AVE., TEL. SUP. 2462

LAUTIER FILS

Natural and Aromatic Raw Materials
Essential Oils
for

Perfumery •

Cosmetics •

Soap •

Lautier Fils

INCORPORATED

154-158 WEST 18th STREET NEW YORK 11, N. Y.

Grasse Paris London Beyrouth

MANUFACTURERS OF QUALITY RAW MATERIALS FOR PERFUMERY FOR OVER 100 YEARS

PURCHASING DEPARTMENT

French Essential Oil Industry To Resume Shipments to U. S., According to Government Survey Made Abroad

The floral and essential oil industry of France is now, for the first time since the liberation, in a position to make shipments to its pre-war customers in the United States and other oversea markets, the Department of Commerce announced.

This French industry is centered in the Grasse region of the Alpes Maritimes, with other producing areas near Cannes, Vallauris, Bar, and Seillans.

The announcement is based upon a report by Lester A. Barber, Bureau of Foreign and Domestic Commerce specialist on floral and essential oils, perfumery, and related products. Mr. Barber has just returned from France, where he made a first-hand survey for the Department of Commerce with the collaboration of the Department of State and the Foreign Economic Administration.

Although 100 per cent resumption of normal manufacturing of the quality type of perfume and toilet preparations will not be possible in 1945 in any of the principal world markets, nevertheless it is hoped that special arrangements now being worked out may ameliorate conditions.

Grasse producers informed Mr. Barber that their factories will be ready to produce to full capacity as soon as land and maritime transportation services are resumed and the difficulties of importing basic materials are overcome. The highly specialized staffs are practically intact, and their buildings and industrial establishments are unharmed.

The current situation is somewhat less favorable with regard to aromatic botanicals, cultivation of which has suffered greatly from lack of artificial fertilizers, damage caused by military occupation, and scarcity of necessary hand labor. Stocks of the majority of the basic materials employed in processing likewise are greatly reduced, and shortages of coal, gasoline, special petroleum solvent, crystallizable benzene, and packing materials present serious problems.

Mr. Barber found that stocks of floral oils for foreign shipment are extremely short at present because of small crop yields in 1944. Moreover, very little output was reserved for overseas markets, for two reasons: (1) Paris manufacturing perfumers could use total production at existing prices; and (2) no one expected the liberation of France to be effected so rapidly. The situation is expected to improve, however, inasmuch as forecasts for 1945 for 13 principal floral oils indicate from 67½ to 70 per cent of average pre-war harvests. In both floral and essential types of oils, sufficient yields in 1945 should permit manufacturers to resume production of a large percentage of high-quality perfumes and toilet preparations in both the United States and the United Kingdom.

No precise data are available on the quantities of the various floral and essential oils consumed in France, but it was generally stated in trade circles that French perfumers normally utilize from 65 to 75 per cent of domestically cultivated production. United States imports are considerably larger in volume than those of the United Kingdom, according to the producing exporters.

Lavender and lavendin, produced in several Departments near Grasse, are in a relatively favorable supply situation. It was reported that half of the 1943 output is still unsold, all that of 1944 is available, and the 1945 production soon will be added to inventories. France, comparatively speaking, does not consume a large percentage of either. The supply available for export, therefore, appears to be more than ample, and the size of oversea shipments probably will be determined largely by ability to purchase at a satisfactory price.

Mr. Barber pointed out that normally the essential oil industry and the tourist trade (principally British and American) are the main sources of sustaining revenue in the Grasse area. Now that there is no tourist trade, the essential oil industry is doubly important to the economic life of the region.

There are 42 essential oil factories in the area, employing about 2,500 workers. The natural flowers, upon which they depend for their existence, are cultivated by approximately 5,500 small farmers aided by about 1,000 seasonal workers. If the families involved are included, about 45,000 persons are directly dependent upon this industry for their livelihood. Indirectly the many trades and services that are integral parts of the region are vitally concerned.

There can be no question, Mr. Barber said, as to the deep interest of the inhabitants of southeastern France in the prompt resumption of full activity in the floral and essential oil industry.

Grasse firms, of course, have a basic, permanent interest in maintaining their three principal buying markets—France, the United States, and the United Kingdom—and are voluntarily reserving stocks on a pre-war percentage basis which is eminently fair to all. French exporters have been given an incentive

(*Continued on page 655*)

APRIL PRICE CHANGES

UP

Buchu leaves 3c
Citral 75c
Cohosh root 6c
Damiana leaves 4c
Dandelion root 10c
Digitalis leaves 5c
Elder flowers 2c
Elm bark 5c
Ephedra vulgaris 4c
Henbane leaves 20c
Papain powd., pure 10c
Tonka beans, Angostura 50c

DOWN

Arabic sorts 1c
Cinnamic alcohol 35c
Gentian root 3c
Jalap root 8c
Lycopodium 50c
Menthol 75c
Mercury metal $5
Rhubarb root HD 5c
Saffron Spanish $2.

Prices quoted in this section were current on the first of this month.

YOU CAN DEPEND NOW AS ALWAYS ON SHERWOOD'S
CONSISTENTLY HIGH QUALITY AND PERSONALIZED ATTENTION

white oils

petrolatums
ceresines, white and yellow

SHERWOOD REFINING COMPANY, INC.
THE REFINERY OF CONTROLLED SPECIALIZATION
ENGLEWOOD, N. J. Refinery: — WARREN, PA.

HUISKING

DRUGS IMPORTS EXPORTS CHEMICALS PHARMACEUTICALS OILS VITAMINS

A B C D E K

MENTHOL CRYSTALS U.S.P.
for prompt and future shipment
HYOSCINE (Scopolamine) HYDROBROMIDE U.S.P.
now available for prompt delivery
ARECOLINE HYDROBROMIDE, N.F.
SULFA DRUGS
CAMPHOR U.S.P. Du Pont
Powder — Tablets
SULFUR PRECIP., U.S.P.
Sylvania Brand
OIL CAMPHOR WHITE SYNTHETIC
LYCOPODIUM U.S.P.
PAPAIN
SPERMACETI U.S.P.
HAARLEM OIL
QUINCE SEED
PREPARED CALAMINE, N.F.

BUYING & SELLING AGENTS

CHAS. L. HUISKING & CO., INC.
155 VARICK STREET, NEW YORK 13, N. Y.
Chicago Office
561 E. Illinois St.
Cable Address
HUISKING, NEW YORK
LONDON AGENTS: Wheeler & Huisking, Ltd., 36 Great Tower St., London, E. C. 3, England

RELIABLE SINCE 1872
P.D.
PEDER DEVOLD
COD LIVER OIL
U.S.P.
PURE • IMPORTED • TESTED • STANDARDIZED
"THE CHOICE OF CAREFUL BOTTLERS"

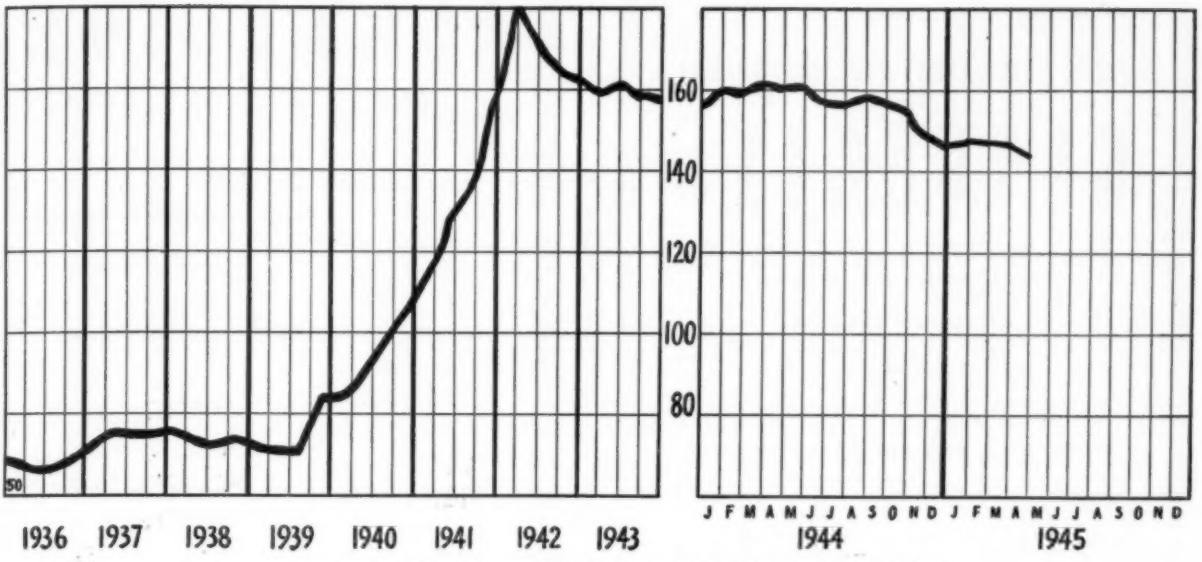
Available for prompt and later shipment.
In all Potencies—Standard, High Potent, Special.
In any required packing.
In one gallon to carload quantities.
All oils vitamin-tested here; fully guaranteed.
Let us quote you now on your immediate or seasonal requirements.

IMPORT EXPORT

PEDER DEVOLD OIL COMPANY, INC.
155 VARICK STREET, NEW YORK 13, N. Y.
Cable Address: VITAMINE, NEW YORK All Standard Codes

SANTONIN
MEETING REQUIREMENTS OF ALL INTERNATIONAL PHARMACOPOEIAS
ALKALOIDS OF AMERICAN MANUFACTURE

50 Raw Materials—Weighted Price Index. 1926=100.



The price index of fifty commodities for April declined from 145.5 to 143.7.

No Tangible Improvement in the Spice Supply Situation Here; Lack of Shipping Main Difficulty

No tangible improvement in the spice supply situation in this country has resulted from the liberation of the Mediterranean area, including southern France, or from the reconquest of most of the Philippines, according to William Archibald Jr., president of the American Spice Trade Association. The two major shortages, in black pepper and cinnamon—which have wide common usage—continue acute with little prospect of immediate relief.

Relief in both these instances must await the freeing of the spice islands of the Netherlands East Indies from Japanese control, the reconquest of southern China and Indo-China and the reopening of the ports of Hong Kong and Canton to shipping. Mr. Archibald said the amount of shipping which is made available for such imports after these areas are freed will determine when the shortage will end,.

Present supplies of black pepper are sufficient for about one-fourth of our needs and are distributed on a strict quota basis. There are plentiful supplies of black pepper available in British India, but the selling price there is twice the rpice level permitted here by the Office of Price Administration, making it impossible for American firms to buy it, Mr. Archibald said.

The only development since the reopening of the Mediterranean area has been the opening of trade negotiations with North Africa, where aromatic seeds such as coriander, canary, cumin and fenugreek are obtained. No actual shipments have been made, but it is hoped that ships may be made available soon for these cargoes, Mr. Archibald said.

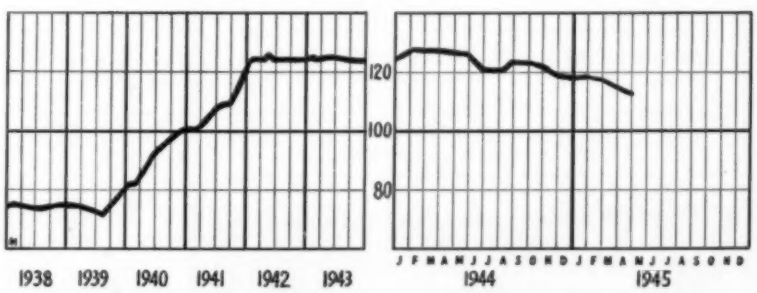
This country formerly obtained many of its fine herbs from southern France, such as thyme, savory, marjoram, celery seed, bay leaves and fennel, and the trade hopes to obtain these items when shipping again is available. Mr. Archibald reported that, as far as he knew, no negotiations have been opened for a resumption of trade. Some letters have been received in the trade here from French dealers asking the market prices in the United States, but no offers to sell have been made as yet.

The entire spice trade situation hinges on shipping, and shipping will be the dominating factor in the business for the next three years or so, Mr. Archibald believes. He reported that many pleas have been made both to the War Shipping Administration and the War Food Administration, urging that ships going to Africa be permitted to stop over a few days in order to pick up cargoes.

Most of these ships return empty as soon as their cargoes are unloaded. This policy is necessary, the W.S.A. contends, because of the need for ships and the fact that quicker runs for ships in effect increase the size of the fleet.

The trade's pleas for return cargoes have not been entirely unsuccessful, Mr. Archibald reported. After negotiations 200 tons of African ginger now are en route here. This, together with the supplies which have been obtained from India and Jamaica, has resulted in

15 Medicinal Chemicals—Weighted Price Index. 1926=100



The medicinal chemicals index declined from 119.6 to 118.3. Menthol dropped to $10 a pound.

ALL GRADES OF REFINED

GLYCERINE

Distributors and Stocks in
All Principal Cities

Factories at
Cambridge, Mass., Baltimore, Md.,
Hammond, Ind. and St. Louis, Mo.

LEVER BROTHERS COMPANY

Producers and Refiners

50 Memorial Drive — Cambridge 39 Mass.

ALKALOIDS

GLUCOSIDES---DRUG EXTRACTIVES

As in **WORLD WAR I**
Now in **WORLD WAR II**

ACONITINE
ARECOLINE
ASPIDOSPERMINE
ATROPINE
BERBERINE
CHRYSAROBIN
COLCHICINE
DIGITALIN
EPHEDRINE
ESERINE
HOMATROPINE
HYDRASTINE
HYOSCINE
HYOSCYAMINE
LOBELINE
PICROTOXIN
PILOCARPINE
SANGUINARINE
SPARTEINE
STROPHANTHIN
YOHIMBINE

INLAND ALKALOID CO.

MANUFACTURING CHEMISTS
TIPTON INDIANA U.S.A.

M F C
*Reg. U.S. Pat. Off.

MENTHOLONE

MANN
The new synthetic replacing Mentho at a fraction of its cost.

NIKETHAMIDE

MANN
N.N.R. and B.P.
Clear water soluble.

BENZOCAINE, U.S.P.
BENZONAPHTHOL, N.N.R.
BROMURAL, N.N.R.
CALCIUM LEVULINATE, N.N.R.
CALC.-MAGN. PHYTATE (Phytin)
CAMPHORIC ACID, C.P.
CAMPHOR SULFONATES
CARBASONE, U.S.P.
CARBROMAL, N.F.
HISTAMINE BASE & SALTS
HISTIDINE HYDROCHL.
ICHTHAMMOL, N.F.
MERBROMINE, N.F.
SEMICARBAZIDE HYDROCHL.
STRONTIUM SALTS
TERPIN HYDRATE, U.S.P.
THYMOL IODIDE, U.S.P.

Ask for our Monthly Price List of FINE CHEMICALS for MEDICINE, ANALYSIS & INDUSTRY

MANN FINE CHEMICALS
Manufacturing Chemists
136 Liberty St. • New York 6, N.Y.
PLANT PATERSON, N.J.

MIRAPON-"DFC" SYNTHETIC DETERGENT

In Powder Form
For Quality Bubble Bath
Formulation

- Excellent Foam
- Fine Appearance
- Economical
- Prompt Shipment

Write-Free Sample, Booklet, and Price

THE MIRANOL CHEMICAL CO., Inc.

16 Melville Place, Irvington 11, N. J.
Quality Chemicals

plentiful stocks for the American trade, making it no longer necessary to distribute ginger on a quota basis.

Complete liberation of the Philippines will not benefit the spice situation, because these islands have never been an important source of supply.

The Japanese still control the rich spice islands of the Netherlands East Indies. These islands have been one of the main spice sources, providing us with 90 per cent of our black pepper, 50 per cent of our nutmeg and mace and a fair percentage of our cinnamon needs. What condition the plantations will be in when the Japanese are driven out is uncertain. The Netherlands East Indies government has advised the trade it has no information.

Indo-China and southern China have been the principal sources of supply for cinnamon, providing the finest grades as well as the cheapest. Mr. Archibald feels that even if the internal transportation system is wrecked when the Japanese are driven out it will not be too long a time after liberation that cinnamon will be available. Most of it comes from the inland areas and transportation has been more or less primitive. The main shipments, however, will have to await the reopening of the ports of Hong Kong and Canton and the availability of ships.

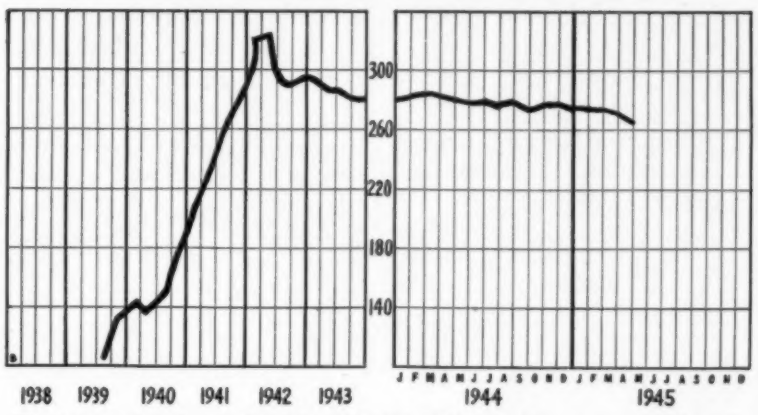
In regard to spice growing, which started here after the war began, Mr. Archibald believes that those spices which can be produced in large volume will continue to be grown here after the war. Those in which the total yearly usage is comparatively small and which have to be hand-picked will again be bought abroad, because American wage rates would make the cost prohibitive in comparison with world prices.

Despite years of war, adequate shipments of nearly all spices have been maintained to this country from Africa, India, South America and the West Indies. Except for black pepper and cinnamon, the shipments received and the inventories built up prior to the war have prevented any critically acute shortage developing, Mr. Archibald said.

Anise Production, Peru

The 1944 crop of anise in Peru is estimated at 50 metric tons, of which approximately 30 tons were used for domestic consumption and the remainder was exported. The area planted to the crop in 1942 was estimated at 200 hectares.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index declined from 274.7 to 271.1. Buchu was up to 83 cents; digitalis rose to 70 cents; gentian was down to 37 cents and rhubarb dropped to 45 cents.

Vanilla Expected

Vanilla bean importers are expecting a shipment to leave Madagascar sometime this month but there is nothing definite and no one seems to have any idea as to the tonnage that may be shipped. Should such a shipment be made, it would include beans that had been purchased up to the end of January for which letters of credit had been opened after January 3.

Dry weather is reported affecting the flowering of the new Mexican crop, but there is a possibility of some improvement if rains appear within a reasonable time. Some arrivals of South American beans are expected and it is said thay will sell at from $8.25 to $8.50 a pound.

Miscellaneous

Such articles as goldenseal root, senega, blood root, Spanish saffron, lobelia, and Mexican sarsaparilla are all scarce and firm. Individual orders for three to five pound lots have gradually reduced the spot supply on Spanish saffron and remaining lots are now being held for $42 to $43 a pound. A fractional reduction in the price of gum arabic brought out a slightly better inquiry but no sizable orders are reported. Tragacanth is in a fairly good supply but no further reduction has been noted in prices. There is a reasonably good supply of such items as Indian rhubarb root and colocynth pulp. Good quantities of Irish moss are moving into consuming channels. The article has been meeting with increased favor as a substitute for certain scarce gums. Buchu stocks gained to the extent of 125 parcels and the market held exceptionally firm at 83c to 85c per pound.

ESSENTIAL OILS

(Continued from page 651)

to resume their foreign shipments since freedom of payments has been assured them by the United States and French Governments.

Monetary affairs were found to be presenting some obstacles, however. Firms importing essential oils into the United States claim that because of the present established value of the franc (50 francs to $1.00), they are unable to make purchases except at prices higher than the resale prices permitted by the Office of Price Administration.

Mr. Barber stated that, in consequence of war conditions, American and British manufacturers have lacked the products of France, and French perfume manufacturers and essential oil importers have lacked the essential oils from France's own colonies, the United States, and the British Empire. He added that the Governments of both the United States and France desire restoration of commerce on a private basis, except insofar as the United States Commercial Company can facilitate any phase of the cycle.

Acreage of Citronella

It is estimated that between 20,000 and 35,000 acres in Ceylon are at present planted in citronella grass. The total volume of exports in 1944 was slightly less than in the preceding year, but the total value was higher.

Approximately 25,000 acres are under cultivation in cinnamon trees in Ceylon. The costs of production have risen, and the shortage of synthetic fertilizers in Ceylon has put a premium on cinnamon leaves, The total amount shipped

LANOLINE

Anhydrous U. S. P. Hydrous

specify ROWAG *quality*

For better creams and ointments

BEESWAX
White U.S.P. Yellow

ALCOLAN
Absorption Base

ROBINSON WAGNER CO.
MANUFACTURERS AND REFINERS
110 East 42nd Street New York 17, N. Y.

MYSORE GOVERNMENT
Sandalwood
~~ Oil ~~

Distilled from
Santalum Album

{ INSIST ON ORIGINAL CANS AND CASES }

Sole Agents for the United States
In Canada: *Sole Agents*
W. J. BUSH & CO. (*Canada*) Ltd. Montreal

W. J. BUSH & CO.
(Incorporated)
Essential Oils
New York
Chicago National City, Calif. Montreal

Laboratory Buildings, R. T. Vanderbilt Co., E. Norwalk, Conn.

VEEGUM
MAGNESIUM ALUMINUM SILICATE GEL

For

LEG MAKE-UP
TOOTH PASTES
BRUSHLESS CREAM
LATHER CREAM
HAND CREAMS
LOTIONS
EMULSIONS

PROTECTS FLAVORS PROTECTS PERFUMES
STABILIZES EMULSIONS

Samples Upon Request

Specialties Department
R. T. VANDERBILT CO., Inc.
230 Park Avenue New York 17, N. Y.

in 1944 was about one-half that exported in 1943.

Bergamot Oil Coming

That long reported deal of getting another supply of bergamot oil from Italy seems to be well on its way to fulfillment. The latest information is that the army has bought the oil, and it is just a question now of finding containers and ship space for transporting it over here.

It is now known definitely what quantity has been acquired but the rumors are that it is quite substantial, probably as much as was obtained before—90,000 pounds. When it arrives it can be expected to be distributed in much the same manner as before.

It is also understood that the army has purchased some more lemon oil, but the trade need not expect any of it to get into private commercial channels. It is scheduled to go for army uses, as heretofore.

Miscellaneous

No further shipments of benzyl benzoate are to be made except by specific WPB directives, and in view of the tremendous quantities that are expected to be used by the Government, most of the other benzyl derivatives will be unobtainable including such articles as benzyl alcohol, benzyl acetate and benzyl salicylate. There appears to be little hope of any realization in the extremely tight position in bois de rose. It is understood that there is a good quantity of oil available for shipment but no licenses are being granted in the primary center.

FINE CHEMICALS

Three or four times as much penicillin will be produced this year to treat civilians and the armed forces than in 1944, Fred. J. Stock, chief of the Drugs and Cosmetic Branch of the WPB's Chemical Bureau predicts.

Prices have dropped from $20 per package to less than $2 during the past two years and further reductions are expected. In 20 months production has inincreased a thousandfold from 4,000 to over 4,000,000 packages per month.

Distribution in April will total about 1,500,000 packages or 150 billion units.

Alcohol From Wood

Construction of one of the world's largest, and America's first commercial plant for the production of ethyl alcohol from sawdust and waste wood by the Scholler-Tornesch method, has reached a point where it is confidently expected that it will be in operation by July 1st.

The $2,250,000 project occupies a 14 acre site at Springfield, Oregon. It is the property of the Willamette Valley Wood Chemical Company of Eugene, Oregon, which was formed by local lumbermen. Financing was arranged through the Defense Plant Corporation.

An initial daily consumption of 200 tons of sawdust with a corresponding output of 10,000 to 12,500 gallons of ethyl alcohol is planned. The plant is designed to increase that output greatly and ample supplies of raw material are available to permit rapid expansion.

Cod Liver Oil Iceland

Production of cod liver oil, one of Iceland's oldest industries, has reached an annual value of $3,250,000. The following table shows the growth of production from 1939 to 1944:

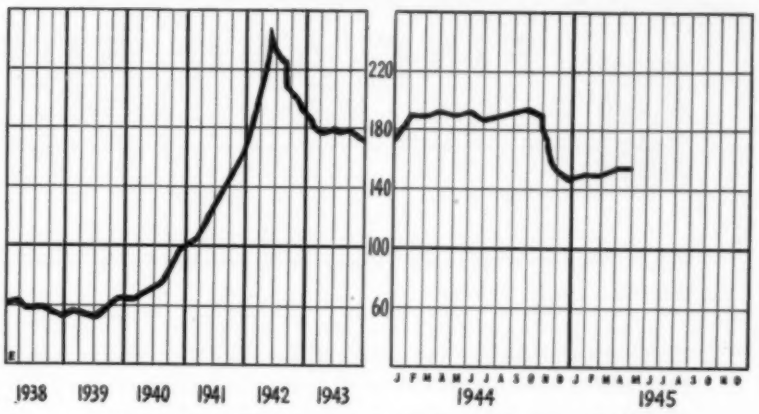
	Metric tons
1939	4,500
1940	5,400
1941	5,080
1942	4,750
1943	6,800
1944	8,800

Most of Iceland's production of cod liver oil is exported, since domestic consumption is of little importance. In 1939 and 1940 the United States was the principal buyer of cod liver oil, but in 1941 and 1942 Great Britain purchased large amounts. However, in 1943 and 1944 the bulk of the shipments went again to the United States. Total exports of cod liver oil (including a small percentage of industrial oils) in 1943 amounted to 5,550,140 kilograms, compared with 5,335,670 kilograms in 1942.

Nicotinic Acid Now Ample

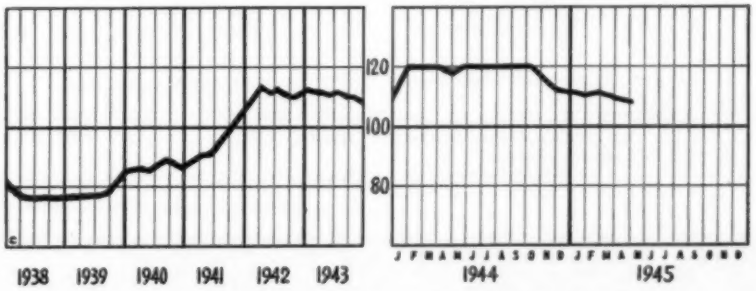
Control over the distribution of nicotinic acid has been discontinued and in contrast to the disturbing shortages which developed earlier in the war in both the acid and amide, stocks are now declared to be ample.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oils index remained without change at 151.8.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index declined from 115.0 to 114.7. Menthol was lower at $10 a pound.

FINE AND SUPERFINE

Kelton Powders—Face, Bath, Talcum—have won an enviable place in the boudoir of madam and the dressing room of monsieur.

Under many of the best know national labels, Kelton Powders associate with America's best people. Their quality holds friends and builds pestige for leading cosmetic houses who know that Kelton Powders are not only fine but superfine.

A line on your letterhead brings Self-Selling Samples which will tell you the truth without varnish. Quantity Production of Quality Cosmetics.

KELTON

Cosmetic Company

230 West 17th Street, New York 11, N. Y.
819 Santee Street, Los Angeles 14, Calif.

Lipsticks • Rouges • Eyeshadow • Bath Powder • Face Powder • Mascara, etc.

RAW MATERIALS *for the* DRUG & COSMETIC INDUSTRY

TRY THIS SERVICE!
Let Us Mix
Your Private Formulas

LAMEPON K—A soapless and limestable detergent for Textiles, Soaps, Insecticides, Sanitary Cleaners, Laundry Products.

LAMEPON 4C—A foaming and wetting agent of slightly acid reaction for cosmetics.

QUADRAFOS—A stable polyphosphate for water conditioning and effective detergency.

For samples and information write to

WELCH, HOLME & CLARK CO., Inc.

563 GREENWICH STREET — ESTABLISHED 1838 — NEW YORK CITY

THE BENDER CORP.

Manufacturing Chemists Since 1922

Toilet Water • Cologne • Perfume

BULK AND PRIVATE LABEL

●

PLANTS IN

NEWARK, N. J. • EAST ORANGE, N. J. • SAN JUAN, PUERTO RICO

Inquiries Solicited

Address all correspondence to East Orange, N. J.

CHEMICAL **KESSCO PRODUCTS** SPECIALTIES

PROPYLENE GLYCOL MONO STEARATE

PURE and SELF-EMULSIFYING GRADES

For use in

« COSMETICS » « PHARMACEUTICALS »

« FOODS »

• UNIFORM QUALITY •

• DEFINITE SPECIFICATIONS •

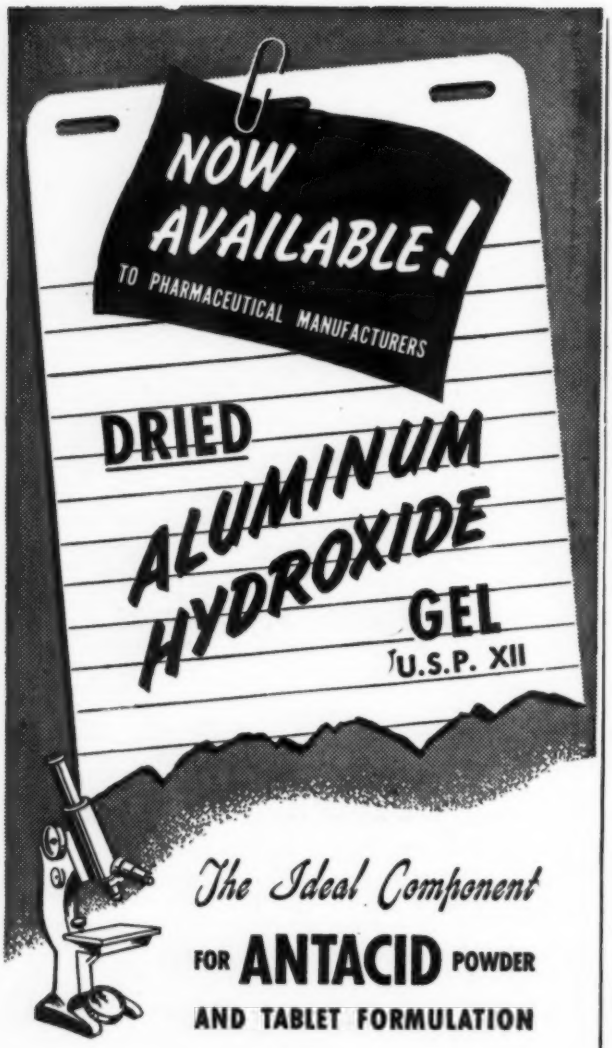
• HIGHEST PURITY •

OTHER PROPYLENE GLYCOL ESTERS ARE ALSO AVAILABLE

For Samples, Specifications etc., WRITE TO

KESSLER CHEMICAL CO., Inc.

STATE RD. and COTTMAN AVE. ESTABLISHED 1921 PHILADELPHIA 35, PA.



Developed in the laboratories of Schofield-Donald Company after many years of research, Dried Aluminum Hydroxide Gel U.S.P. XII offers the only effective method for controlling gastric acidity without the use of alkalies. Its action is persistent and prolonged. We invite you to send for testing samples.

Manufacturers of Fine Chemicals

Schofield · Donald Co. INC.

· 88 SHIPMAN ST., NEWARK 2, N. J. ·

Drug Plants in California

(*Continued from page 584*)

of interest to the drug industry, are also of interest to California growers. The ones of greatest interest are: Anise, basil, caraway, celery seed, coriander, cumin, dill, fennel (sweet), marjoram, laurel leaves, mints, mustard seed, paprika, poppy seed, rosemary, sage, summer savory, thyme.

The outlook for anise in California is said not to be very promising. Basil was planted to the extent of about 65 acres. Since the normal price of caraway seed is around eight or nine cents per pound, and the war time price that is making possible cultivation of the seed, it is looked upon as only a war time development that will disappear when normal trade is resumed. It is not at all certain that California growers of celery seed can compete with the growers in India whose prices here have been as low as 14 cents per pound. Enormous yields are obtained in some places and with modern machinery a profit might be made, but other crops grown on the same land would probably be more inviting. Coriander, which has a normal price of 4 to 8 cents a pound might be successfully grown at war prices, but California growers are not interested in experimenting to any extent. California growers likewise are not interested to any extent in cumin which has a normal price of 9 cents per pound and a war price of about 15 cents per pound.

Dill yields a normal price of only 7 to 8 cents per pound, which with a yield of 500 to 700 pounds per acre would only mean $35 to $56 per acre which is not of interest.

Going through the entire list in this way we come to the conclusion that California growers will likely continue to be interested in the production of mustard, paprika, common sage, caraway, French marjoram, basil, summer savory, thyme, and small amounts of rosemary, winter marjoram, tarragon, and other minor condiment plants.

Antibiotics Other Than Penicillin

(*Continued from page 577*)

clinical stage of development, experimental studies have shown that streptothricin is markedly effective against many gram-positive and gram-negative organisms. Furthermore, mice heavily infected with a variety of gram-negative organisms are completely protected by the administration of small amounts of this antibiotic. Although it may be given by mouth, the drug is more effective parenterally than orally. However, preliminary experiments show that streptothricin by mouth produces effects in the intestinal tract similar to certain sulfonamides. This suggests that streptothricin may be of value in bacillary dysentery and typhoid fever.[30] If this proves to be the case, it has been suggested[31] that streptothricin could function as a valuable supplement to penicillin, which has little or no action against the organisms responsible for these intestinal diseases.

The marked effects of streptothricin *in vitro* against gram-positive and gram-negative organisms, plus the fact that body fluids appear to have no inhibitory effect on its action, indicate that the antibiotic may be of great value in infected wounds.[32] More than being merely antibacterial, streptothricin has been found effective against various species of yeasts, pathogenic fungi and other higher organisms.[33]

Although much is still to be learned before it can be employed therapeutically, streptothricin has shown properties which mark it as definite advance in the field of antibiotic agents and which indicate that it may assume a role in therapeutic practice similar to that held by penicillin.[34] As a matter of fact, since penicillin and streptothricin differ so widely in their bacterial specificity or antibiotic spectrum, the possibility of a combined effect has been raised.[35]

Streptomycin, another, newer member of this group, resembles streptothricin chemically, toxicologically and in its action against many pathogenic organisms. However, it is effective against certain organisms not subject to the action of streptothricin.[1, 36, 37] It appears that streptomycin may have particular value in animal diseases such as brucellosis and fowl typhoid.[38] Newer studies indicate that streptomycin exerts a "striking suppressive effect" on tuberculosis in guinea pigs.[39] Further evaluation of its effects on the human form of the disease is awaited with much interest.

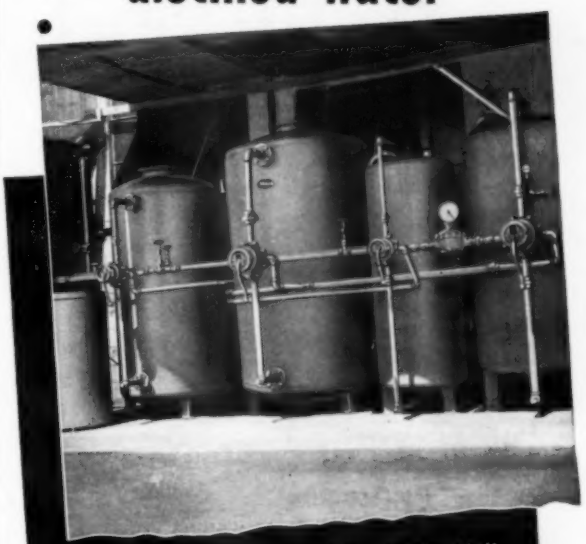
Without going into a discussion on any of them, it should be mentioned that various actinomyces species are capable of producing other antibiotic substances; including actinomycin A, actinomycin B and actinomycetin.[1, 27]

Various fungi, more particularly the Penicillia and the Aspergilli, are prolific producers of antibiotic substances. Of course, penicillin is the outstanding agent obtained from Penicillia, but there are quite a few others from this group that offer interesting possibilities. For example, gliotoxin, crystallized some years ago,[40] has an even wider antibiotic range than penicillin since it is non-selective and both fungicidal and bactericidal.[5] Unfortunately, it is more toxic than penicillin and its therapeutic possibilities limited.[1]

Though derived from different fungi, it has been found that the various antibiotics known as clavacin, patulin, claviformin and clavatin are identical substances.[6, 41, 42, 43] Of these identical agents, patulin has undoubtedly attracted the widest attention as a result of a comprehensive symposium[44, 45, 46, 47, 48] on its characteristics and uses. The exciting feature of these reviews was the report that patulin appeared to be highly effective in its action upon the secondary organisms which complicate the common cold. Prompt relief and rapid disappearance of symptoms followed the use of nasal douching or snuffing of patalin solutions. In one series,[47] 57 per cent of the treated cases recovered completely within forty-eight hours, as compared with only 9.4 per cent of the controls.

These findings were so encouraging that large scale tests were undertaken by a British army group[49] and

De-ionized water replaces distilled water



Typical plant installation of De-ionizing Unit

At 1% to 10% of the cost of distilled water, ILLCO-WAY De-ionizing Units are daily producing pure water comparable to that obtained by distillation. The installation pictured above (aircraft plant, 3,000 gph) is typical of the ILLCO-WAY equipment that has been purchased by industrial, chemical and pharmaceutical plants for obtaining high-purity water. Lower operating costs of De-ionizing often pay for the installation in a few months, and these savings continue for the long life of the unit. . . . No fuel, no cooling water required, no periodic dismantling for cleaning. Flow rates up to 500,000 gph.

ILLINOIS WATER TREATMENT COMPANY
847-5 Cedar Street, Rockford, Illinois

PORTABLE LABORATORY UNIT
1½ gallons of pure water per hour. Quality of water comparable to that produced by distillation. Daily meeting exacting standards of industrial, chemical, university, city and state laboratories.

Water Treatment Engineering

TESTED IN THE LABORATORY · PROVED IN THE FIELD
ILLCO-WAY

Essential Oils and Aromatic Products

Quick Delivery!

● As direct importers of many products, manufacturers of others, and warehousing large inventories, we can promise you exceptional deliveries. For example:

NOW ACCEPTING ORDERS FOR APRIL/MAY DELIVERY:

OIL OF FRENCH LAVENDER 40/42%
OIL OF FRENCH LAVANDIN
OIL OF CHAULMOOGRA
OIL OF THYME
OIL OF GERANIUM BOURBON
CREAM OF TARTAR, U.S.P.
OIL OF CADE, U.S.P.

SPOT NEW YORK WE ARE OFFERING:

OIL OF ROSEMARY
OIL OF SPIKE LAVENDER
OIL OF SAGE
LABDANUM GUM
OAKMOSS RESIN SOLUBLE

● Wire, 'phone or write . . .

Try us for quality and price as well as delivery and better service. Let us quote on your requirements. Coast trade: Contact O. D. Royer Co., 1340 East Sixth St., Los Angeles, our new representatives.

EDWARD REMUS & CO. Inc.
11 West 42nd Street • New York 18, N. Y.
CABLE ADDRESS: EDSUMER, NEW YORK
TELEPHONE: CHickering 4-4382
FACTORY & WAREHOUSE: 807 West 43rd Street, NEW YORK, N. Y.
WESTERN OFFICE: 816 Delaware Street, KANSAS CITY, MO.

by the Medical Research Council.[50] After exhaustive tests under many varied conditions and in many different areas, the conclusion was reached that there was no evidence to show that patulin is effective in the treatment of the common cold.

This disappointment should not obscure the fact that the group of antibiotics identical with patulin possess definitely interesting properties. They display bacteriostatic powers against both gram-positive and gram-negative organisms, but show no selective differentiation between the two groups. They are much less active than penicillin against gram-positive organisms, but the position is reversed with regard to gram-negative bacteria. Serum and pus do not interfere with their action. However, they are quite toxic on parenteral administration and hence are useful only on local application.[47] One great advantage is the fact that high yields are possible from cultures of certain potent strains of the fungi.[36]

Citrinin, another antibiotic from the Penicillium group, is non-selective in its action on bacteria and shows both bactericidal and fungicidal effects.[27] Much work must be done before it can be used, but if found therapeutically valuable, it possesses the advantage of being simply and abundantly produced.[28] The same may be said of penicillic acid, obtained from at least two members of the Penicillium group. This antibiotic is active against both gram-positive and gram-negative organisms, especially the Coli group.

Penicillin B, notatin and penatin, all identical substances under different names, are of interest in that they are derived from *Penicillium notatum*, which is also the source of penicillin. Though effective against gram-positive and gram-negative organisms, they have only slight activity and specificity against a limited member of bacteria.[1]

Quite recently it was reported[51] that a suspension of a green mold, which probably belongs to the Penicillium group, is capable of inhibiting the growth of tubercle bacilli. Suspensions of this mold inactivated tuberculin in two hours, but filtrates had no effect. More work is obviously in order.

The second important group of fungi, the Aspergilli, also has its quota of representative antibiotics. Interesting is the fact that at least four of them have been isolated from the same fungus, *Aspergillus flavus*. These are: aspergillic acid, flavicidin, flavicin and gigantic acid. Despite their common origin, however, they differ in their properties. Aspergillic acid, for example, has a rather limited range of activity against both gram-positive and gram-negative bacteria,[37, 52] while the other three behave like penicillin in their action against gram-positive organisms.[53, 54, 55]

Fumigacin, found identical with helvolic acid,[6, 56] though derived from a different member of the Aspergillus group, *Aspergillus fumigatus*, also shows an antibacterial action similar to penicillin. According to Waksman and Geiger,[57] fumigacin offers promise as an antibiotic agent but is less active than penicillin. Fumigatin, closely related to fumigacin, and derived

from the same fungus, is considerably less active, displays limited sensitity and hence is less valuable therapeutically. Another antibiotic, spinulosin, is chemically related to fumigation but is produced only by certain strains of *Aspergillus fumigatus*. It is a relatively weak antibacterial substance.

Very recently, a strain of *Aspergillus fumigatus*, isolated as a contamination, provided substances active against gram-positive cocci and gram-negative bacilli. Most significant, however, was the fact that the substance was also effective against some acid-fast bacilli; namely tuberculosis bacilli. The crude material proved bacteriostatic against one strain of tubercle organisms when diluted as much as 1:1,400,000. It is stated[58] that the new substance may be similar to fumigacin, though some of its properties seem to indicate that the two antibiotics are not identical.[59, 60, 61]

Although fungi-derived antibiotics appear limited largely to the genera Penicillium and Aspergillus, a few other fungi are capable of producing antimicrobial substances. One of these, *Chaltomium cochliodes*, produces a substance which promises to be of some importance in therapeutics. Called chetomin or chaetomin, it resembles penicillin in its antibacterial spectrum; being equal to penicillin against gram-positive organisms. It is also effective, but only to a limited extent, against certain gram-negative bacteria. Chetomin is considered to be nontoxic to animals, a fact that may have considerable bearing on its possible therapeutic utilization.

Other fungi are being found capable of producing antibiotics. Among the latest reported is an antibacterial material obtained from the organisms responsible for dermatophytoses such as "athlete's foot" and the like. According to the findings of Peck and Hewitt[62] of the United States Public Health Service, the antibiotic substance produced by this group of pathogenic fungi resembles penicillin in many respects, including its spectrum of behavior and activity against penicillin-resistant organisms.

Going higher on the scale of plant evolution, it appears that certain types of algae may be sources of antibiotics. It has been known for some years that cultures of chlorella produce a substance that tends to inhibit cell multiplication. Methods for making extracts containing this growth-inhibiting substance have been devised and the active substance has been named, chlorellin. Tests with chlorellin showed it to have antibacterial properties against gram-positive and gram-negative bacteria. Definitely bacteriostatic, it appears that chlorellin may also be bactericidal. Its activity is but slightly inhibited by serum protein.

The interesting thing about chlorellin, it is stated,[63] is the fact that its production does not entail the use of expensive and troublesome organic culture media. Only organic salts, carbon dioxide and light are required to produce the antibiotic material. Extraction of the crude substance containing chlorellin is easy, but methods of purification must be worked out.

The results of these investigations inspired another

ISCO

DEPENDABLE COSMETIC TALCS

FOR YOUR TOP GRADE FACE POWDERS:

• TRINITY COSMETIC Talc
• TRINITY SUPERFINE Talc

Excellent for Talc Powders, Rouges, etc.

• SILVER LAKE Talc I S
• SILVER LAKE Talc N S
• SILVER LAKE TALC L S
• SIERRA COSMETIC TALC

Stocked in New York, Chicago, Cleveland, Boston and Philadelphia.

Carlots direct from California Mills.

Write for details of chemical analysis . . . . . also bulking value and mesh.

•

ISCO ALGIN A Uniform, Viscous Marine Colloidal Material . . . .

Forming a Homogenous Flexible Film.

A Highly Satisfactory Thickening and Dispersing Agent in the manufacture of Drugs, Pharmaceuticals and Cosmetics . . . . Also a perfect stabilizer for emulsions. . . .

Write for full information

•

ISCO ABSORPTION BASES

Feature Pre-War Quality

Derived from the valuable ingredients of Lanolin. Perfectly adapted for all water-in-oil emulsions and creams . . . . .

INNIS, SPEIDEN & CO.

117 LIBERTY STREET • NEW YORK 6

BOSTON 10 • CHICAGO 10 • CINCINNATI 2

CLEVELAND 15 • GLOVERSVILLE • PHILADELPHIA 3

It is with Great Pleasure

. . . . that we announce the resumption of active business relations with Tombarel Freres, Grasses, France.

We have every reason to expect that in the near future we will again be in position to offer supplies of their

- ABSOLUTE SUPREME FLOWER ESSENCES
- SURFINE ESSENTIAL OILS

as well as other T. F. Perfume Specialties.

•

Tombarel
PRODUCTS CORPORATION
L. J. Zollinger, President
12 EAST 22nd STREET • NEW YORK 10

Chicago Representatives
A. C. DRURY & CO. Inc.
219 East North Water Street

group[64] of workers to investigate the lichens, which lie somewhere between fungi and algae in the plant world. Already sixty out of the 118 species of arctic lichens tested have been found to contain antibacterial substances, but the active principle or principles have yet to be isolated and studied.

It should be evident by this time that the production of antibiotics or anti-infective substances is not exclusive with certain bacteria and fungi, but extends further up the evolutionary scale. As Dubos[3] has remarked, "It must be kept in mind . . . that the production of these agents is not an exclusive attribute of micro-organisms but is widely distributed in the plant and animal kingdom." He points to the fact that a great variety of products which possess interesting antibacterial properties have been separated from animal tissues and body fluids. One of these, lactenin, has been obtained from milk in the albumin fraction and exhibits great activity against streptococci. Another substance, lysozyme, causes the lysis of several bacterial species. Lactenin and lysozyme have not yet found application in the treatment of infectious diseases but they may be of significance in preventing certain types of infection.

Referring to plant products, Dubos observes that quinine, emetine, chaulmoogra oil and many other substances were used in Therapy long before the bacteriological era. In fact, some of them have reamined the best chemotherapeutic agents available for certain specific purposes.

Returning to antibiotics, it is of interest that in a very recent editorial in the *Journal of the American Medical Association*[65] reference is made to several antibiotics reported by botanists as far back as 1928. It is recalled that in 1936, Sherman and Hodge[66] reported antiseptic properties for raw juices of cabbages, turnips and horse radish.

Of great significance was the search for antibacterial plant extractives undertaken by Osborn[67] in England. In this systematic search 2,300 different flowering plant species were tested. Of these, 134 species gave definitely positive results. Forty-two of these extracts gave 1 plus or 2 plus inhibition with *Staphylococcus aureus*, but were completely inactive against *Escherichia coli*. Most of the others gave 2 plus to 6 plus inhibitions with both organisms; among the most interesting being extracts of the seeds of a number of varieties of cabbage, cauliflower and broccoli or kohlrabi. Certain well-known drug plants, such as Atropa, Durata and Digitalis, showed no bacteriostatic properties. Negative results were also observed with most plants currently recommended by herbalists.

Working independently and without knowledge of the studies being made by Osborn, Lucas and Lewis[68] of the Michigan State College of Agriculture confirmed these results and made important contributions of their own. Among the most interesting findings were those concerned with detailed studies of one of the honeysuckles. Extracts of the roots were highly active against one plant pathogen and showed antibacterial

action against the two standard test bacteria. From the results of their work, Lucas and Lewis envisage the application of some of these inexpensive plant extracts to the solution of problems of plant pathology and food spoilage, especially in the prevention of certain seed-borne plant diseases not yet brought under control.

In their report, these workers had also remarked that many of the plants used for centuries as folk remedies, but disregarded as being based on superstition or custom, might contain principles capable of combating disease-producing micro-organisms in the human body. This brings to mind the very interesting work done by Russian scientists[69] with onions, garlic and allied plants. As far back as the days of the Pharoahs of Egypt, garlic and onions were esteemed for their "curative" values and the belief in the beneficial action of these plants has persisted to this day in many parts of the world. It is only a few years ago that scientists confirmed the bacterial action of vapors given off by onions and the like. Going a step further, Soviet workers have discovered that active substances, with strong action against both bacteria and protozoa, are produced by such plants during their life cycles. Called phytonocides, the chemical nature of the active substances remains obscure, but are obviously not identical with the essential volatile oils of the plants. Without waiting for isolation of the active substances, Russian doctors have already obtained good results from these phytonocides by applying onion pastes to infected wounds.

It has become very obvious that here in the field of antibiotics lie possibilities and far reaching implications toward advances in therapy never dreamed of a decade ago. Fleming,[70] the discoverer of penicillin, has pointed out that there are thousands of microbes which may manufacture antiseptics even better than penicillin or which may give a clue to the chemical linkages responsible for the destruction of bacteria. One can only agree with his observation that, "The work is not finished. It is just the beginning."

BIBLIOGRAPHY

1. McDonnell, J. N.: Am. J. Pharm. 116:401, 1944.
2. Dubos, R. J.: J.A.M.A. 124:633, 1944.
3. Geiger, W. B. & Conn, J. E.: H. Am. Chem. Soc. 67:112, 1945.
4. Waksman, S. A. & Woodruff, H. B.: J. Bact. 44:373, 1942.
5. Waksman, S. A.: Am. J. Pub. Health 34:358, 1944.
6. Waksman, S. A.: Science 99:220, 1944.
7. Lesser, M. A.: Drug & Cosmetic Ind. 50:504, 1942.
8. Dubos, R. J.: J. Exper. Med. 70:1, 1939.
9. Holland, M. O.: Am. J. Pharm. 116:102, 1944.
10. Editorial: J.A.M.A. 127:280, 1945.
11. Belozensky, A. N. & Passhena, T. S.: Lancet 2:716, 1944; Am. Rev. Soviet Med. 2:138, 1944.
12. Gause, G. F. & Brazhnikova, M. G.: Am. Rev. Soviet Med. 2:134, 1944.
13. Gause, G. F. & Brazhnikova, M. G.: War Med. 6:180, 1944.
14. Sergiev, P. G.: Lancet 2:717, 1944; Am. Rev. Soviet Med. 2:140, 1944.
15. Manevich, A. A. & Pitskhelauri, G. Z.: Am. Rev. Soviet Med. 2:143, 1944.
16. Dubos, R. J. & Hotchkiss, R. D.: J. Exper. Med. 73:629, 1941.
17. Dubos, R. J.: J. Pediatrics 19:588, 1941.
18. Council on Pharm. & Chem.: J.A.M.A. 124:985, 1944.
19. Dorland, W. A.: Clin. Med., Sept. 1944, p. 244.
20. Bloomfield, S.: Am. J. Ophth. 27:500, 1944.
21. Bordley, J. E., Crowe, S. J., Dolowitz, D. A. & Pickrell, K. L.: Ann. Otol., Phin. & Laryngol. 51:936, 1942.
22. Crowe, S. J. & Ward, A. T.: North Carolina Med. J. 4:431, 1943.
23. Herrell, W. E. & Heilman, D.: J. Clin. Invest. 20:583, 1941.
24. Rammelkamp, C. H.: War. Med. 2:830, 1942.
25. Rankin, L. M.: Am. J. Surg. 63:391, 1944.
26. Crowe, S. J.: Ann. Otol, Rhin. & Laryngol. 53:227, 1944.
27. Kennedy, W. P.: Pharm. J. 153:78, 1944.
28. Bergy, G. A.: West Virginia Med. J. 39:272, 1943.
29. Neter, E.: Science 96:209, 1942.
30. Robinson, H. J., Graessle, O. E. & Smith, D. G.: Science 99:540, 1944.
31. Editorial: J.A.M.A. 126:103, 1944.
32. Robinson, H. J. & Smith, D. G.: J. Pharmacol. & Exper. Therap. 81:390, 1944.

Put LUSTEROID on your Mental Buying LIST

Give Your Post-war Packaging these* LUSTEROID *Advantages

Picture your post-war products in LUSTEROID vials and tubes and you'll see many reasons why these modern plastic containers can pep up your future sales.

LUSTEROID combines product visibility with full protection. For all its light weight, it is strong, rigid, unbreakable. You have all colors of the rainbow to work with in clear or opaque vials and tubes. Your sales message can be printed right on the container so that no labels are necessary. You save additional expense in lower shipping and packing costs.

These crystal-clear containers come in standard diameters from ¼" to 1¼" and lengths up to 6". Cork, slip-on or screw-cap closures.

Write for post-war details

LUSTEROID CONTAINER CO., INC.

Formerly Lusteroid Division of Sillcocks-Miller Company

Office and Factory

10 W PARKER AVENUE, MAPLEWOOD, N J

MAILING ADDRESS SOUTH ORANGE, N J

POWCO BRAND Neutral Soap is "tops" in the trade because its chemical and physical characteristics are *dependably* uniform. Year after year, the volume of Powco Soap has grown as Dentifrice and Toilet Requisite manufacturers have switched to this American product. Today, modern production methods make it possible to offer air floated fineness POWCO BRAND Neutral Soap of the highest quality at an actual saving to you.

We are not merely sellers of Neutral Soap. We furnish expert consultation on formulas. Let us show you the safe way to cost economies with POWCO Neutral Soap.

POWCO BRAND

POWDERED NEUTRAL SOAP

JOHN POWELL & CO.
One Park Avenue
New York 16, N. Y.

33. Foster, J. W. & Woodruff, H. B.: Arch. Biochem. 3:241, 1943.
34. Anon.: Med. Times 72:XXVII, Nov. 1944.
35. Foster, J. W. & Walker, B. L.: J. Bact. 46:187, 1943.
36. Holland, M. O.: Am. J. Pharm. 116:321, 1944.
37. Anon.: Med. Times 72:XXX, Dec. 1944.
38. Jones, D. et al.: Science 100:103, 1944.
39. Feldman, W. H. & Hinshaw, H. C.: (through) Science, Suppl. 101:10, Jan. 26, 1945.
40. Weindling, R. & Emerson, O. H.: Phytophytology 26:1068, 1936.
41. Anon.: Manuf. Chem. 15:35, 1944.
42. Hooper, I. R. et al.: Science 99:16, 1944.
43. Karow, E. O. & Foster, J. W.: Science 99:265, 1944.
44. Raistrick, H.: Lancet 2:625, 1943.
45. Birkinshaw, J. H. et al.: Lancet 2:625, 1943.
46. Gye, W. E.: Lancet 2:630, 1943.
47. Hopkins, W. A.: Lancet 2:631, 1943.
48. Greenwood, M.: Lancet 2:634, 1943.
49. Stansfield, J. M., Francis, A. E. & Stuart-Harris, C. H.: Lancet 2:370 1944.
50. Medical Research Council: Lancet 2:373, 1944.
51. Miller, D. K. & Rekate, A. C.: Science 100:172, 1944.
52. Jones, H., Rake, G. & Hamse, D. M.: J. Bact. 45:459, 1940.
53. McKee, C. M., Rake, G. & Houck, C. L.: J. Bact. 47:187, 1944.
54. Philpot, F. J.: Nature 152:725, 1943.
55. Bush, M. T. & Goth, A.: J. Pharmacol & Exper. Therap. 78:164, 1943.
56. Chain, E. et al.: Brit. J. Exper. Path. 24:108, 1943.
57. Waksman, S. A. & Geiger, W. B.: J. Bact. 47:391, 1944.
58. Asheshov, I. N. & Strelitz, F.: Science 101: 119, 1945.
59. Waksman, S. A. & Bugil, E.: J. Bact. 48:527, 1944.
60. Geiger, W. B., Conn, J. E. & Waksman, S. A.: J. Bact. 48: 531, 1944
61. Anon.: Amer. Prof. Pharm. 11:54, 1945.
62. Peck, S. M. & Hewitt, W. L.: Public Health Rep. 60:148, 1945.
63. Pratt, R., et al. and Spoehr, H. A. et al.: Science 99:351, 1944.
64. Burkholder, P. R. et al.: (through) N. Y. Times, April 1, 1945.
65. Editorinl: J.A.M.A. 127:522, 1945.
66. Sherman, J. M. & Hodge, H. M.: J. Bact. 31:96, 1936.
67. Osborn, E. M.: Brit. J. Exper. Path. 24:227, 1943.
68. Lucas, E. H. & Lewis, R. W.: Science 100:597, 1944.
69. Symposium: Am. Rev. Soviet Med. 1:237, 1944.
70. Fleming, A.: (London Letter) J.A.M.A. 127:349, 1945.

Choosing a Trade-Mark

(*Continued from page 585*)

its existence, at great expense, and everything is in order. Unfortunately, however, the prospective consumer is afraid to pronounce the name and it's too long and it's too awkward and it sounds like something for animals and not a delicate cosmetic cream. So it stays on the shelves until the culmination of a successful infringement suit of a little known competitor who has used that mark for many years for sales of various oriental cosmetics to a small but widespread group of special consumers.

The correct procedure for choice of a mark is simple, and in the long run profitable.

The persons involved in the production and marketing should confer on all phases of the product. Its attributes should be given consideration and suggestions from all parties invited. These should first be tested as by the Analysis Chart given in my article in the November issue of this magazine, and those marks deemed of merit should then be handed over to your trade-mark agency for an official search of possibly conflicting prior trade-marks. From this a tangible mark or group of marks will be discovered, and if a market test can be made on these, so much the better. When a final decision has been reached the trade-mark should then be registered. The pressing onto the public of a meaningless or uninteresting word or like mark by extensive advertising is not a good or economical way to proceed.

Finally, no one person should select a new trade-mark, but it should result from the concerted unbiased efforts of all persons involved in the production and marketing, if your trade-marks are to reflect the modern note of appeal so prominent today in the goods of some of the more enterprising members of the drug, cosmetic and toilet goods profession.

The fourth rule is *to keep full records of all steps in the conception of the trade-marks.*

It is not often in trade-mark matters that the records of conception, reduction to practical form, and commercial use are called into the light of day, but it may be necessary, at some future date to prove not only when you started the mark on its way, but also that you have not abandoned this, and the more important the mark is, or may become in the future, the greater the necessity of such records. So, accordingly, the artist's sketches, the finished drawing, your order for the first and subsequent labels, and shipping of the labeled goods to consumer outlets should all be preserved carefully. In this connection, it should be mentioned that a good practice to adopt is to identify goods in every available way with their specific trade-marks, for instance, on shipping carbons, billheads, invoices and like documents and it is much better to identify the goods involved by wording including the trade-mark. These documents help to prove your continuance of use of the trade-mark on the goods which is necessary in order to preserve your rights to monopoly.

Records of the type suggested are good to have "just in case," but another advantage sometimes lies in their possible use as decorative display material in your waiting room for instance, since the people who come there may have a fleeting interest in a display of the steps in conception of your now famous trade-mark, and may obtain a glimpse of your thorough business tactics therefrom, to your credit as a supplier to them of goods.

The best method to carry out this rule is to have printed a chart for your trade-marks, on which can be recorded all pertinent data with cross references to the individual items of evidence. Such a chart can be readily made up by a trade-mark expert but should be specific for your organization since the data will vary with the type of organization and your manner of doing business. Charts or similar pre-set records are ideal for keeping complete identity of your trade-marks since they are labor saving and yet always preserve the right information in an orderly manner.

With the above four rules established throughout the personnel of your organization who are intimately concerned with the evolution and preservation of your trade-marks, you can safely feel that the best is being given to your products to introduce them in their best guise to the public.

Most of us from childhood up try to avoid set rules, but the fixed habits which are generated by observance thereof usually have a definite bearing on our way of life.

Thus, it is with trade-mark matters which are too often dealt with lightly and as of only secondary importance. If your organization is brought to appreciate constructive habits with relation to your trade-marks, by following simple rules of the nature above given, the dividends will definitely show in your greater financial returns for the same selling effort.

A New Medium for Fixing, Blending and Stabilizing Perfume

HIBISCONE offers a timely and effective means of solving the problem created by the prevailing shortages in Musks. In existing formulations Hibiscone may be used as an extender of Musks in general; in new formulations it may be used as a complete replacement for them. Its great potency, which substantially exceeds that of Musk Ambrette, makes it particularly valuable as an extender and replacement for this product.

HIBISCONE, although belonging to the Musk family, is not a Nitro Musk. Its odor recalls that of natural Musk and Ambrette Seed. It may either be added to finished perfume and toilet water or incorporated in the perfume oils.

HIBISCONE is very stable to alkalis and acids. This makes it applicable to perfume for alkaline as well as acid cosmetics. It does not cause discoloration.

HIBISCONE blends in speedily with the oils in which it is incorporated, results being manifest in about a week or ten days.

HIBISCONE will be found very effective for deodorizing alcohol, and particularly for modifying the odor of isopropyl alcohol.

HIBISCONE S is a valuable, yet inexpensive, medium for stabilizing perfume in toilet soap, without discoloration. It will also neutralize the basically fatty odor of soap stock, thus permitting of a reduction in the percentage of perfume oil ordinarily used.

HIBISCONE S can also be used to advantage in sachet, dusting powder, bubble bath, shampoo, liquid soap, lipstick, etc.

HIBISCONE and **HIBISCONE S** are reasonably priced and can therefore be used even in low-priced products.

Samples of Hibiscone and Hibiscone S will gladly be sent upon request.

VAN DYK & COMPANY INCORPORATED 1904

MANUFACTURERS OF PERFUMERY & COSMETIC RAW MATERIAL
MAIN & WILLIAM STS., BELLEVILLE 9, N. J.
WESTERN OFFICE: 1282 SUNSET BLVD., LOS ANGELES

Lipsticks by MONTENIER

YOU will find it worth while to plan NOW, not alone for your present lipstick requirements, but also for your post-war expectations.

We are prepared to meet your requirements—present or future—and to give you quantity deliveries on those consistently dependable products upon which the reputation of this house has been built.

We shall be glad to work from your formulas or to create new formulas for you. We invite your inquiries.

Telephone
Superior 1565

JULES MONTENIER & CO.
Cosmetics of Quality
417 NORTH STATE STREET, CHICAGO 10, ILL.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

WHY NOT GET THE

B E S T

FOR YOUR MONEY?

STANTON
AMMONIUM THIOGLYCOLATE

gives *more* value than you can audit in dollars and cents—that's why so many cosmetic manufacturers are relying for this fine organic chemical on Stanton Laboratories.

Because of the rigid laboratory controls under which Stanton Ammonium Thioglycolate is produced we can *guarantee:*

★ **PRECISE alkalinity—which means tighter ringlets without risk of harming hair.**

★ **REDUCED skin irritation—and no customer complaints on that score.**

★ **RAPID processing action—cuts the average time necessary to process hair, saves time for more customers.**

★ **PLEASANT odor—no more smelly odors to work with.**

The Stanton SPECIAL FORMULATION comes in concentration or solution as desired—at no extra cost.

Write for Details

STANTON LABORATORIES

STANTON
LABORATORIES
MANUFACTURING CHEMISTS
WYNCOTE PENNSYLVANIA

The Vitamin Business

(*Continued from page 578*)

mostly they are popular because they are the "poor man's vitamins." The price of synthetic C is less than that of oranges, grapefruit, lemons, or tomato juice on a vitamin-content basis. Moreover, nearly a third of the total 1944 dollar volume of the B group went (by government mandate) into flour for home baking and into bread to replace natural B vitamins lost in milling.

The $85 million worth of fish-oil products and synthetic materials produced by the bulk-vitamin companies in the U. S. last year were turned over to manufacturers who compounded, assayed, packaged, distributed, and sold them to customers for $250 million. Ingredients for 100 multiple-vitamin capsules containing representative quantities of A, D, B_1, B_2, C, and niacin cost 33 cents. Ingredients are shipped to Gelatin Products, Inc., and capsulated for 10 cents per hundred. Cost of overhead, materials, handling, and manufacturing loss adds another five cents per hundred. Gelatin Products ships the capsules in bulk to the company which tests them for potency, deterioration in transit, etc. The capsules are bottled and labeled at a cost of 6 cents per hundred, giving a total direct cost of 54 cents per hundred. To this the company adds roughly a dollar to cover profit, assaying expenses, promotion, and to help finance some research it is doing in another pharmaceutical field. To the $1.50 the wholesaler adds about 30 cents and retailer adds his usual margin of $1.20, bringing the final price up to around $3—the average retail price today.

Vitamin-capsule manufacturers have one common denominator—their tie with Gelatin Products, Inc. This concern last year turned out something like four billion soft, sealed vitamin capsules, 95 per cent of the U. S. total. The company claims its dollar volume exceeds that of any other finished vitamin producer in the country. One manufacturer estimates that nearly one-third of total U. S. output is in tablets. Today the government is a large buyer of multiple-vitamin tablets, which it gets for 29 to 35 cents per hundred, not much more than the cost of manufacture. Tablets are still preferred by some manufacturers. These manufacturers may add minerals, give the tablets a coating and airtight finish, and retail them for roughly $1.75 to $2.50 per hundred. Where minerals have been added the price advantage of tablets becomes illusory since the consumer usually has to take three tablets to get the amount of vitamins contained in one capsule.

The most successful purveyors of vitamin pills are the ethical houses. Most of these manufacturers—Parke, Davis, Eli Lilly, Squibb, Upjohn, Abbott, Mead Johnson—have been in the vitamin business since the early cod-liver-oil days. The extent of their success is revealed by surveys showing that ethical brands of vitamins have between 70 and 75 per cent of the market. Sales of Upjohn's Unicaps are estimated to be around $8 million dollars a year, or about 5 per cent of the total vitamin sales. Next in dollar volume are

Mead Johnson and Squibb, with Parke, Davis, Abbott Laboratories, Eli Lilly, Hoffmann-LaRoche, and others close behind.

Next in importance to ethical vitamin products are not nationally advertised brands—as might be expected—but "dealers'" brands, which have up to twenty per cent of the market. Sears Roebuck's Super-Kaps are said to be among the top ten multiple-vitamin products in sales. The third group of vitamin-pill promoters, the "proprietary" brand manufacturers, have spent more money to create demand for vitamins than any other group in the industry. Yet for all their efforts, by which both ethical and dealers' brands have profited, the proprietaries have only between 5 and 10 per cent of the total vitamin sales. The manufacturers blame the doctors who will not recommend advertised drugs. Popular brands usually make plenty of "one-shot" sales, but—as one manufacturer puts it—"a consumer takes vitamins a few weeks, notices no difference in how he feels, and right away he's through with vitamins." On the other hand consumers who buy ethical brands on doctor's recommendation usually give vitamins a much fairer trial—if only because they have paid $3 or $5 for the recommendation.

The proprietary brands did not always trail so far behind the others. Between 1939 and 1943 their share of the total rose from 1 or 2 per cent to about 15 per cent. The initial success of Vitamins Plus, the first nationally advertised multiple vitamin, attracted a dozen similar products to the market within a short time. But last year the proprietary brands appeared to be losing ground. In November, Standard Brands, which had spent several millions in promoting Stams and Stan-B, pulled both products off the market. Several large companies, among them Schenley Distillers and Colgate-Palmolive-Peet, abandoned their plans for entering the vitamin field. Some companies are said to spend a dollar or more in advertising for every dollar they get back in proprietary-brand sales. And bets are being made in the trade that several nationally advertised multiple-vitamin products will be taken off the market this year.

Some of the proprietaries' sales loss has been picked up by the ethicals and the dealers, but apparently some of it is lost for good. Industry surveys report that a quarter of the families who once took vitamins do so no longer. In 1943-1944, sales to college-educated families and those living in the larger cities fell sharply. These facts are a warning to the industry that the peak of the great vitamin boom has been reached.

The question is: who needs vitamins? And on this there are three principal schools of thought. One school of conservative nutritionists doubts that anybody needs vitamins except people who suffer from deficiency diseases. This group believes that the concept of "subclinical" (or incipient) vitamin deficiencies—so widely touted as the cause of everything from "that tired feeling" to heart trouble—is merely a hypothesis, since laboratory tests for the detection of incipient deficiencies are still largely experimental. Moreover,

Dealer's Choice

YOU tell us the product you want

And we

- CREATE THE FORMULA
- DESIGN THE PACKAGE
- ORDER ALL MATERIALS
- DELIVER YOUR FINISHED PRODUCT
- READY FOR SALE

COMPLETE PRIVATE LABEL SERVICE

COSMETICS—PERFUMES

HOUSE OF HOLLYWOOD

WEST COAST PLANT
777 E. Gage, Los Angeles 1

EAST COAST PLANT
351 W. 48th St., New York 19

GLYCERINE

...quickly available

Armour's 332 stock points mean fast, dependable service

U. S. P. . . . A chemically pure, water-white glycerine meeting all requirements of the U. S. Pharmacopoeia . . . for use in foods, pharmaceuticals, cosmetics or any purpose demanding highest quality. Specific gravity, 1.249—25°C./25°C.

ARMOUR AND COMPANY

1355 W. 31st Street, Chicago 9, Illinois

• SUPPLIERS *to the* DRUG *and* COSMETIC INDUSTRY •

GERANIOL, Abs. & Soap
ALPHA AMYL Cinnamic Ald.
CITRAL C. P.
CINNAMIC ALDEHYDE
PEACH ALDEHYDE
LINALOOL
BERGAMOT, Imit. Extra
YLANG YLANG, Imit. Extra

Samples and quotations on request

GUNNING
GUNNING and GUNNING
601 WEST 26th ST., NEW YORK 1, N. Y.
AROMATIC CHEMICALS MANUFACTURING DIVISION

neither the precise quantities of vitamins needed by man for good health nor the possible dangers of overdosages have been fully established.

A second, more tolerant, school holds that incipient deficiencies—as well as outright disease—can be diagnosed and benefited by vitamin therapy. Among the symptoms listed for the detection of incipient deficiencies are "lack of appetite," "poor sleeping habits," "backwardness in school," and "repeated respiratory infections."

The third school recognizes no limitations on the value of vitamin pills to every man, woman, and child in the U. S. They point with alarm to the vitamin-destroying practices of food growers and distributors, the exhaustion of U. S. soil by over-production of crops; the factor like pace at which cows and hens are forced to produce; the cold storage, canning, and quick freezing of foods; the long-distance transportation of fresh fruits and vegetables; and most important—the bad food habits of large portions of our population, especially bad cooking. These practices, they firmly believe, are making us a nation of incipient as well as outright vitamin-deficiency cases. Since it is impossible to change the entire food-growing, food-distributing, and food-cooking customs of the country, they feel the next best thing is to supplement our diets with vitamin concentrates.

Production of the various vitamins in 1944 were: Natural D, 4 to 5 trillion units, valued at $1,300,000; D_2, 16 trillion units, valued at $1,600,000; D_3, 10 trillion units, valued at $6,300,000; A, 80 trillion units, valued at $16,000,000; C, 1,600,000 pounds, valued at $17,500,000; B_1, 250,000 pounds, valued at $20,000,000; B_2, 100,000 to 150,000 pounds, valued at $9,000,000 to $13,500,000; niacin, 500,000 to 750,000 pounds, valued at $3,200,000 to $5,000,000; nicotinamide, 250,000, valued at $850,000; B complex, no figures of production available, but value given at $6,000,000 to $10,000,000.

Cosmetic Emulsion Manufacture

(Continued from page 581)

oratory curiosity to a valued emulsifying agent in many branches of the industry. It is an organic base and combines with acids and acidic materials. It is less alkaline than ammonia which it resembles in chemical reaction, its pH being between 10 and 11 in water solution. It is not harmful or caustic to the skin. The commercial product is not pure triethanolamine but contains some mono- and some diethanolamine. It readily forms soaps with fatty acids, and 140 parts of commercial TEA, as it is termed for brevity, combines with 284 parts of stearic acid.

When used for making emulsion TEA has greatly resulted in simplifying the process. TEA emulsions are stable and of small particle size. More concentrated emulsions may be readily diluted by the addition of more water.

To make TEA emulsions oil, water, TEA and a

fatty acid are used. In place of oil, other water insoluble oily type products may be used. Three methods for carrying out the emulsification are recommended. By the Soap Method, the oil and water are alternately stirred into the fatty acid—TEA soap. By the Water Method, the TEA and fatty acid are dissolved into a water solution and the oil is stirred into this. The Soluble Oil Method comprises the formation of a solution of the TEA soap in the oil and the addition of water to this. In the fourth and last method called TEA Method, the TEA is mixed with the water and the fatty acid with the oil. Then these two solutions are intimately mixed together.

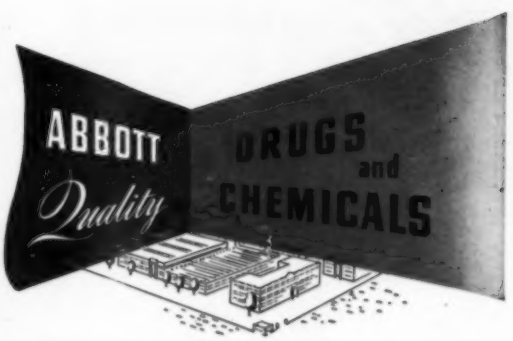
In the making of certain emulsions, especially film forming emulsions like self polishing floor waxes, it is desirable to produce a water resistant emulsion or one that possesses freedom from a tendency to re-emulsify after application when wet with water. In such cases morpholine, an organic amine is more suitable than TEA. This amine combines weakly with fatty acids and is more moderately volatile. It may be substituted to produce emulsions which closely resemble the TEA emulsions by directly substituting an equal weight of morpholine for TEA.

Another series of emulsifying agents, containing the amine group are the aminohydroxy derivatives of the nitroparaffins. These came on the market several years after triethanolamine and morpholine and may be used to prepare a variety of emulsions. Of these amines, the amino methyl-propanediol is the one recommended for use in cosmetics. It produces odorless soaps of high emulsifying power, non-irritating and of stability as to color and consistency. Solid creams made thereof are quite free from oil "leakage."

Amino glycol is the shortened name for 2-methyl-2 amino-1, 3-propanediol. It is a yellowish-white crystalline product, odorless, and extremely soluble in water. Solutions are water-white and transparent and up to 250 parts of amino glycol may be dissolved in 100 parts of water. The pH of a tenth-molar solution is 10.78, indicating low alkalinity. No special precautions are required in storing amino glycol since it does not take up moisture from the air, although it will absorb carbon dioxide. It is soluble in alcohol, but not in mineral oil.

Since amino glycol itself is a mild base, and in addition has been thoroughly tested and proven to be harmless to the skin, its fatty acid compounds because of their high emulsifying power, are suitable for cosmetic formulation. Moreover, with pure fatty acids, they are light in color or white, and do not darken on aging. This is important in the preparation of creams and lotions that are expected to stay white.

When the polyhydric alcohol esters, that is the fatty acid esters of the glycols and glycerine, are modified by the addition of soap, they become self-emulsifying or act as emulsifying agents. These esters which are non-ionic surface active agents, possess certain advantages over anionic and cationic agents. They are more easily formulated with solvents and other



ANESTHETICS
Procaine Hydrochloride...Procaine Base...Benzocaine...
Procaine Borate...Butyl p-aminobenzoate

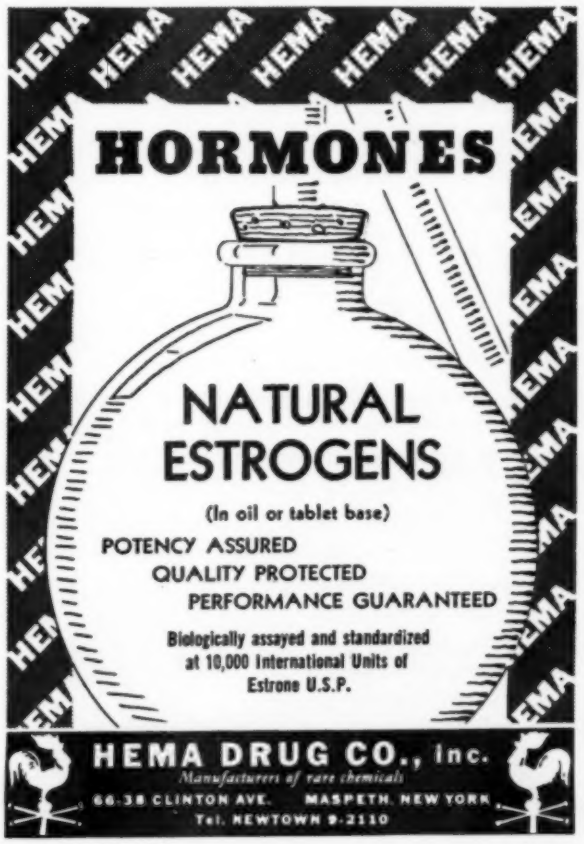
ANTISEPTICS
Acriflavine Hydrochloride...Acriflavine Neutral...
Proflavine Sulfate

HYPNOTICS
Phenobarbital...Phenobarbital Sodium

ALKALOIDS AND DRUG EXTRACTIVES
Ephedrine...Lobeline Sulfate...Podophyllin

For Quotations Address:
CHEMICAL SALES DEPARTMENT

ABBOTT LABORATORIES
NORTH CHICAGO · ILLINOIS



falba
Reg. U. S. and Foreign Countries
The Heart of LANOLIN
THE ORIGINAL ABSORPTION BASE
Write for booklet
Pfaltz & Bauer, Inc.
EMPIRE STATE BUILDING, NEW YORK

EXCLUSIVE
PRIVATE BRAND
COSMETICS
COSMIA
COSMIA LABORATORIES
95 MADISON AVENUE
NEW YORK 16, N. Y.

Founded 1854
FEZANDIE & SPERRLE, Inc.
205 Fulton Street, New York City
HIGHEST STANDARD
Colors and Dyes for Cosmetics, such as
LIPSTICKS — PERFUMES
ROUGES — LOTIONS
FACE POWDERS — SHAMPOOS
MASCARA — CREAMS
SOAPS — Etc.
Your inquiries are invited

THIOGLYCOLLIC ACID (PURE)
and its salts
ZINC STEARATE
GEORGE F. SMITH
CHEMICALS
60 East 42nd Street
New York 17, N. Y.
VAnderbilt
6-3098

chemicals. Of the various glycol esters available, modified diglycol laurate and modified diglycol stearate are used most frequently in the cosmetic industry. The laurate is a straw colored fluid with very faint odor. It gives a pH of 9.0 to 9.2 in 5% aqueous dispersion, has a specific gravity of 0.960 at 25° C. and is of high boiling point (240–325° C.). It is dispersible in water and completely soluble in alcohol, vegetable and hydrocarbon oils. It may be used to replace castor oil in hair tonics and finds use also for hair waves and hand lotions. The glycol stearate is a white, waxy solid with a faint fatty odor having a melting point of 51–54° C. A 3% water dispersion has a pH of 6.8 to 7.1 and its specific gravity is 0.96. It contains no free alkalis or amines, and is dispersible in hot water. It is completely dissolved by hot alcohol, vegetable and hydrocarbon oils. When dispersed with hot water it produces, upon agitation, during cooling, a stable emulsion.

Glyceryl monostearate (modified) is an important fatty acid ester as an emulsifying agent in cosmetic cream making. It is a white, waxy solid of faint odor, dispersible in hot water and completely soluble in alcohol, hydrocarbons and vegetable oils. It is a simple emulsifier to use in that if an emulsion formed by it is spoiled it may be reworked merely by reheating and reagitating. It usually forms whiter products than the glycol stearates. In a 3% water dispersion at 25° C. the pH is 9.3 to 9.7, it melts at 56–57° C. and has a specific gravity of 0.980. It helps to stabilize liquid emulsions and it is advisable to use preservatives like benzoic acid or its esters to keep the creams properly. Greaseless creams are particularly adapted to be made with this stearate.

Sorbitan monooleate and sorbitan monstearate are included among the newer types of emulsifying agents. The former produces a water-in-oil emulsion and finds considerable use as a lanolin extender. The latter is a versatile non-ionic surface active agent and may be had in many variations of compatability, viscosity and water holding power.

A discussion of wetting agents is beyond the scope of this article. Numerous of these products are to be had and they possess many different chemical and physical properties.* They are better described as surface active agents.

Wetting agents have the common properties of lowering surface tension, being uninfluenced by hard water, forming considerable foam with water and other solvents, possessing considerable solvent action and aiding in the formation of emulsions. As to the last property, it has been found that in the making of wax emulsions, especially from high melting point waxes with morpholine, that the emulsification proceeds more smoothly by the combined use of morpholine and certain wetting agents.

Two other types of emulsifying aids and agents are available. One is termed "dispersing agent" which aids in keeping oil droplets separated when reduced in size. The other type consists of proprietary emulsion

agents which are sold under coined names and which may be combinations of other emulsifiers. In such cases the cosmetic chemist must determine their efficacy, usefulness and action in creams.

(To be continued)

*See Ind. & Eng. Chem. 31, 66.1939 for further information.

Menthol

(Continued from page 579)

E. Study of financing for account of the Government of the present crop of peppermint oil on a reasonable basis, and in accordance with present reality.

While everyone admits that, based on the present statistical position, menthol should be selling at lower prices, there is a difference of opinion as to how this should be accomplished. Some factors in Brazil do not want government control but suggest that producers try to establish the lowest prices possible to allow a reasonable profit. It is hoped in these quarters that menthol prices could be brought down to from $7.00 to $8.00 a pound, duty paid New York, but that the decline be made gradually, with midyear shipments selling at about $10.00 New York. The idea is that this decline could be accomplished without hurting anyone too much and without knocking the bottom out of the industry in Brazil.

But since menthol is now available here in some quarters at $9.00 a pound, in spite of the Brazilian floor price of $19.50 per kilo, which would represent a price of $10 a pound in New York, it is obvious that a white market (below the floor price) exists in Brazil and that, somehow, menthol is being purchased for export at below the floor price and that shipment is being effected.

It may be that menthol is such a competitive item that plans such as are now proposed will not work. At any rate it is generally agreed that menthol prices will be lower. Whether at the end of the year menthol will be selling at from $7.00 to $8.00 as predicted by conservatives, or from $4.00 to $5.00 as indicated by the more liberal element in the market, remains to be seen.

CONSOLIDATED OFFERS

1—World automatic Straightaway Labeller.
1—90 gal. stainless steel jack. Kettle.
1—No. 5 Sweetland Filter, 20 copper leaves.
1—Stokes Auger type Powder Filler.
1—Semi-automatic Labeling Machine.
5—Dry Powder Mixers, up to 2000 lbs.
20—Aluminum, Copper, Glass Lined, jacketed and agitated Kettles.
1—Abbe Blutergess Sifter No. 2.
2—Colton No. 3 Toggle Presses.
3—Stokes Steam Water Stills, 5, 10, 25 gal. per hour.

Only a partial listing. Send us your inquiries.

We buy and sell from a Single Item to a Complete Plant
CONSOLIDATED PRODUCTS CO., INC.
20-21 Park Row, New York, N. Y. Shops: 335 Dorcmus Ave., Newark, N. J.

CERTIFIED COSMETIC COLORS
Also
COSMETIC Inorganic Pigments
SUBMIT YOUR INQUIRIES
INTERSTATE COLOR CO., INC.
7 Beekman Street New York City

For Flowery Perfumes
Linalyl Benzoate
Linalyl Anthranilate
Linalyl Salicylate Linalyl Isobutyrate
Linalyl Methyl Tiglate
Terpenyl Formate Terpenyl Anthranilate
FAIRMOUNT CHEMICAL CO., Inc.
Manufacturers of Flavor and Perfume Chemicals
600 Ferry Street NEWARK, N. J.

Hormone Creams
In Bulk For Repackaging
or
Packed Under Your Private Label
Ready for Resale
Available in wide variety of cream types to meet your requirements
MAYO-REESE CO.
712 S. Federal St. Chicago 5, Ill.
Private Label Manufacturers

ALL GRADES OF
REFINED GLYCERINE
U. S. P. B. P.
YELLOW DISTILLED
HIGH GRAVITY
DYNAMITE
REFINERIES LOCATED AT
★ Brooklyn, N. Y.
★ Jeffersonville, Ind.
★ Jersey City, N. J.
★ Berkeley, Calif.
★ Kansas City, Kans.
COLGATE-PALMOLIVE-PEET CO.
GLYCERINE DEPT. • 105 HUDSON STREET
JERSEY CITY 2, NEW JERSEY

Professional Service

THE COLUMBUS LABORATORIES
Analytical and Consulting Chemists
Bacteriologists

We have been solving problems pertaining to foods, drugs and cosmetics since 1893.

33 N. STATE ST. CHICAGO, ILL.

H. A. Seil, Ph.D. E. B. Putt, Ph.C., B. Sc.

SEIL, PUTT & RUSBY, Inc.

Analytical and Consulting Chemists
Formerly Experts for U. S. Dept. of Agriculture

Analyses Made — Formulas Developed
Research Investigations Conducted

Specialists in the Analysis of

Beverages — Essential Oils
Flavoring Extracts — Toilet Preparations
Foods — Spices — Drugs
Proprietary Medicines — Special Formulas
Pyrethrum, Rotenone and other Organic Insecticides

Lab's: 16 East 34th St. New York, N. Y.
Telephone MUrray Hill 3-6368

IDEAS

PATENT YOUR IDEAS
send a Sketch or Model of your invention for
CONFIDENTIAL ADVICE
FREE information and literature

Z. H. Polachek
1234 BROADWAY, NEW YORK
PATENT ATTORNEY
ENGINEER

U. S. Pat. Off. records searched for ANY invention or Trade Mark

---

GEORGE W. PEGG, PH. C
Consultant

Drugs — Cosmetics — Industrial Alcohol
Flavoring Extracts
Labeling — Formulas — Processes

152 West 42nd St., New York 18, N. Y.
Telephone Wisconsin 7-3066
Washington Address: 2121 Virginia Ave., N.W.
Washington 7, D. C. c/o Dr. George W. Hoover

For
NATIONAL DISTRIBUTION
in the
WHOLESALE DRUG & DEPT. STORE FIELD
it's
JACK LEESE ASSOCIATES
551 Fifth Ave. New York 17, N. Y.
well-known, well-liked, well-connected
in the entire industry

***ARLINCO RESEARCH LABORATORY, INC.**

Research, Formulation and Application to the Industry.
Ethical Pharmaceuticals, Drugs, Cosmetics and Perfumery.

333 W. 52nd St., New York 19, N. Y.
Circle 6-7824

* A-R-L-inco means: Applied Research Laboratory, Incorp.

Machinery for Sale

Complete line of rebuilt, guaranteed machinery. See detailed announcement on Page 673 of Consolidated Products Co., 20-21 Park Row, New York City.

CONVEYORS, DRYERS, FILLERS: Liquid powder, tube; Filters, Kettles, Labelers, Mills, Mixers, Coating Pans, Percolators, Sifters. Tablet Machines, Tanks, etc. Send us your inquiries and a list of your idle equipment. Loeb Equipment Supply Co., 912 North Marshfield Ave., Chicago 22, Ill.

FOR SALE: Pfaudler 500 gal. closed, agitated, Jacketed, Glass Lined Kettle; 11—Closed Stainless Steel Tanks, 268 gals.; 2—National Acme Model C20, Stainless Steel Centrifuges; 800 ft. Ball Bearing Roller Conveyor, 12" & 15" widths, 10 ft. lengths; 4—½" & ¾" Single Punch Tablet Machines; Portable Electric Agitators ¼ to 2 HP; 50 gal. agitated steel Tanks, with Netteo drives; Day 8 & 15 gal. Pony Mixers; Copper Jack. Kettles 15 to 150 gals.; 10 H.P. Homogenizer; Double Spiral Mixer 150 gal.; 1—D. & B. 2000 lb. double arm steel Powder Mixer; 2—Biystone jacketed, horizontal. Paddle Type, Steel Mixers, 2000 lbs. capacity; 40 to 150 gal. single & double arm, heavy duty, horizontal Mixers; Paste, Powder, & Liquid Mixers; Filling Machinery; Kettles & Tanks; Grinders, Crushers & Pulverizers; Sifters & Screens; Pebble & Jar Mills; Stills & Columns; Filters & Filter Presses; Dryers; Centrifuges; Pumps. Send us your inquiries. We buy your surplus equipment. Stein Equipment Co., 426 Broome St., New York 13, N.Y.

FOR SALE: Glass Lined and Stainless Steel Tanks; Stainless Steel Lined W. & P. Mixer, 150 gal.; Vibrating Screens; Mass and Powder Mixers; Pulverizers; Labelers; Powder and Liquid Filling Machines; Kettles; etc. Your inquiries solicited. BRILL EQUIPMENT COMPANY, 225 West 34th Street, New York 1, N. Y.

FOR SALE: Factory rebuilt equipment, no priority required; Liquid, Ermold, World semi-automatic and automatic labelers; Liquid Labeler for front and back labels; 20th Century Simplex Bottle Rinser; Meyer Dumore, Liquid and Miller Bottle Washers; 3 used copper jacketed kettles—all priced to sell immediately. Charles S. Jacobowitz Company, 3080 Main Street, Buffalo 14, N. Y.

CONVEYOR—300 ft. 15" wide gravity conveyor for cases, cartons, boxes. Box 711, DRUG & COSMETIC INDUSTRY.

20—New Stainless Steel Tanks—60-1000 gallons capacity. 10—Copper Tanks 50 to 3000 gallons capacities. 4—Single Punch Tablet Presses. 2—Jewel 250 G.P.H. Water Stills. 10—Portable Agitators All New. 3—Shriver Presses Wood Plates and Frames, 12"—18"—24". 1—J. H. Day Powder Mixer. New Stainless Steel Kettles agitated. Also: New Brass Pumps—Gravity Conveyors In Stock. Write For Latest Stock List. PERRY EQUIPMENT & SUPPLY COMPANY, 1515 W. Thompson Street, Phila., 21, Penna.

AVAILABLE—3 brand new stainless steel mixing tanks, never been used; also 2/3 jacketed stainless kettle—priced for quick sale. Box 710, DRUG & COSMETIC INDUSTRY.

Machinery Wanted

HIGHEST PRICES PAID FOR GOOD EQUIPMENT. FIRST MACHINERY CORPORATION, 819-837 East 9th St., New York 9, N. Y.

WANTED: 1 Colloid Mill, 5 to 20 Gallons Capacity (stainless steel); 1 Monel Metal Percolator, 60 Gallons Capacity; 1 Horizontal Filter, Capacity 60-400 G.P.H. (sparkler preferred). No dealers. Write Box 675, DRUG & COSMETIC INDUSTRY.

Help Wanted

PHARMACEUTICAL REPRESENTATIVES—Permanent position with manufacturer of biologicals and pharmaceuticals. Car essential. Pharmacy or pre-medical background helpful but not essential. Productive territories available. Representatives earned $3000 to over $7500 in 1944. Salary and bonus. Write full particulars in confidence. The National Drug Company, Philadelphia 44, Pa.

TABLET MAN wanted by pharmaceutical house in middle west. Want man experienced in granulation, compression and coating, and able to take charge of department. Give qualifications, salary expected in reply to Box 721, DRUG & COSMETIC INDUSTRY.

WEST COAST manufacturer needs Chemist with experience in Cosmetics—especially in hair waving and hair products. Write to Box 722, DRUG & COSMETIC INDUSTRY.

Help Wanted

PHARMACEUTICAL CHEMIST: We are seeking for a client a man with manufacturing background in ethical pharmaceuticals, including ampules, to take charge of small, new pharmaceutical plant. If you are interested, will you please write a letter, giving a full account of your training and experience and your salary requirements, to: Arthur D. Little, Inc., 30 Memorial Drive, Cambridge 42, Mass.

WANTED: Experienced Compounder take charge of Compound Room (Perfume Bases-Flavors.) Must be able to create new items as required and direct others under him. Position open with well established house. Full information, past history, present connection, salary wanted, etc., considered confidential. Box 719, DRUG & COSMETIC INDUSTRY.

WANTED: Chemist, to take complete charge of tablet, capsule, and liquid production for California pharmaceutical manufacturer. Must have successful background and be able to direct men. Splendid remuneration. Unusually pleasant working conditions. Box 720, DRUG & COSMETIC INDUSTRY.

OPPORTUNITY FOR PRODUCTION EXECUTIVE. Must know and be able to handle all manufacturing functions and details in constantly expanding specialty ethical pharmaceutical and chemical plant of old established company which is managed by young men. We want another man for pharmaceutical research in proudct manufacture. Acting for client: Robert N. McMurry & Co., Personnel Management, 332 S. Michigan Ave., Chicago, 4, Ill.

Situations Wanted

EXPERIENCED PERFUMER in essential oil field desires position as consultant with essential oil house. Can develop large line of high grade perfume compounds and specialties. Box 704, DRUG & COSMETIC INDUSTRY.

YOUNG PHARMACEUTICAL EXECUTIVE. Young man, college graduate, whose present duties in a pharmaceutical manufacturing concern have to do with management of Sales, Advertising, Personnel Administration and other phases of management is seeking a position of responsibility with a modern, forward looking concern offering a promising future where his demonstrated executive abilities can be utilized. Merely write Box 689, DRUG & COSMETIC INDUSTRY, for complete details.

PHARMACEUTICAL PRODUCTION CHEMIST. Competent manager. College graduate, doctorate in chemistry, excellent technical and practical training. Expert in tablet manufacturing and coating of vitamins, enteric and difficult coatings, liquids, ointments, tooth pastes, cosmetics. Available at once. Box 716, DRUG & COSMETIC INDUSTRY.

Business Opportunities

ADVICE ON TOILETRIES MANUFACTURE: Creams, Lotions, Dentifrices, Hair and Shaving Preparations, etc. "Pharmaceutical Consultant," 19 Valley Road, White Plains, N. Y.

YOUR CONFIDENTIAL CORRESPONDENCE INVITED. Wanted Product or business opportunity, post-war. Concern with substantial assets, presently engaged in war work, interested in potential post-war items for development and research . . . preparatory to post-war manufacture. Give full particulars first letter. Will treat confidentially. Box 702, DRUG & COSMETIC INDUSTRY.

WANTED—Up to 50 tons inspissated or the equivalent of liquid BILE. Address The Maltbie Chemical Company, Newark 2, N. J.

BELGIAN SCIENTIST would sell patent rights for American continent of industrial and medicinal non-caustic and non-toxic disinfectant. In medical field product has valuable internal uses. Write for sample and details. Apartment 2R, 66 West 69th St., New York 23, N. Y.

DISTRIBUTORS WANTED. An outstanding line of ladies' and gentlemen's toiletries is available for distribution in several sections. Write fully. Box 712, DRUG & COSMETIC INDUSTRY.

TO MANUFACTURERS SEEKING EXPANSION. A well-known Company in Louisiana with established contacts with wholesale drug, grocery and notion trade throughout the Southern States and Central America; wishes to act as distributor for a firm manufacturing an inexpensive line of Drugs, Extracts or Cosmetics. Promotional, repacking facilities, and large warehouse are available. Give full particulars. Box 713, DRUG & COSMETIC INDUSTRY.

FOR SALE BY OWNER who has operated business for 30 years. Soap and disinfectant factory. Neatly furnished living apartment first floor. Hot water, heat. Medium inventory. A real family business. Box 714, DRUG & COSMETIC INDUSTRY.

PRIVATE LABEL MANUFACTURER of complete cosmetic line (men's and women's) has facilities for a few additional accounts. Quality products only. Strict laboratory control. Inquiries invited. Box 715, DRUG & COSMETIC INDUSTRY.

NATIONAL SALES REPRESENTATION

Capable, thorough and frequent coverage of toilet goods outlets in every state in the Union. Warehousing Service.

MERZ-MIHM

38 W. 32nd St., New York 1, N. Y.
567 E. Illinois St., Chicago 11, Ill.

Cetyl Alcohol

Highest Quality Obtainable

Send for samples and prices

WILLIAM D. NEUBERG COMPANY

Chemicals

420 LEXINGTON AVENUE • NEW YORK 17, N. Y.
TELEPHONE LEXINGTON 2-3324

Extract the GUESS WORK from your coloring job

These days when the color—the appearance—the eye appeal of the products you produce is so important to get sales and to keep them, it's more essential than ever to use Peacock Brand Certified Food Colors for the extra brilliance, uniformity and purity they give you.

Stange's

Wm. J. Stange Co.
2538 W. Monroe St. Chicago 12, Ill.

GUMS

ARABIC KARAYA TRAGACANTH
QUINCE SEED GALL NUTS

D. S. DALLAL & CO.
261 Fifth Ave., New York 16
IMPORT MUrray Hill 3-8646 EXPORT

TO MANUFACTURERS SEEKING AN EXPORT MARKET

Leading American Foreign Trader with record of 50 years successful operations in foreign markets is seeking additional lines of important American producers drug sundries, proprietary medicines and specialties for distribution throughout the Orient and Latin America.

Head sales office for Latin America is established in Buenos Aires. Pre-war connections in the Orient will be immediately re-established when conditions permit. Sales agencies under guidance of experts experienced in each market.

If you are seeking clean aggressive representation write us details of your products for both immediate and post-war selling. If interested we will have a representative call on you for further discussions.

Box 660, Drug & Cosmetic Industry

DELTON OFFERS CHEMICALS FOR INDUSTRIAL USES

- AMMONIUM THIOGLYCOLATE
- MENTHOL U.S.P. BRAZILIAN
- DELTO MENTHOL REPLACEMENT
- DELTO ZINC OXIDE 99.91% PURE
  (A replacement for titanium dioxide)
- DELTO GUM BENZOIN
  (synthetic)
- DELTO CARBON BLACKS

DELTON PRODUCTS CORP.
489 FIFTH AVENUE NEW YORK 17, N. Y.

FOUNDED FRL in 1922

"Many a business headache can be avoided by Preventive Chemistry."

FOOD RESEARCH LABORATORIES, INC.
48-14 Thirty-Third Street, LONG ISLAND CITY—1, New York
RESEARCH, ANALYSES, and CONSULTATION for the FOOD, DRUG, and ALLIED INDUSTRIES

POLAK & SCHWARZ, INC.

667 Washington St. New York, N. Y.

Perfume Bases
Compositions and Specialties
Essential Oils Flower Oils
Terpeneless Oils Aromatic Chemicals
Ethers and Esters
Flavors and Extracts

COLOR Sells Your Product!

LEEBEN CERTIFIED DRUG and COSMETIC COLORS are PURE, BRILLIANT, UNIFORM and SOLUBLE

Cosmetic Colors in all new and wanted shades

DOMESTIC and EXPORT
Send for Samples and Prices

LEEBEN CHEMICAL CO., Inc.
389 Washington St., New York 13, N. Y. WA 5-0210

STEARATES

ZINC STEARATE
CALCIUM STEARATE
ALUMINUM STEARATE
MAGNESIUM STEARATE

STEARATE OF MAGNESIUM

Light, Great Adhesiveness. Pure White, Immeasurable Fineness. Heavy if desired. Dusts out under the puff like the finest pollen. Made to satisfy most exacting requirements.

Prompt Shipments in any quantity
Write for samples and prices

STOCKS CARRIED: Chicago, St. Louis, San Francisco, Los Angeles, Kansas City, Mo., Philadelphia, Shawnee, Oklahoma.

STEARATE OF ZINC

Odorless, Impalpable, Pure White. Water Resisting. Great Adhesiveness. Light or Heavy as desired. Highest standard of Purity and Uniformity.

FRANKS CHEMICAL PRODUCTS CO., INC.
55 — 33RD STREET BROOKLYN, N.Y.
BUSH TERMINAL BLDG. NO. 9

ADVERTISING INDEX

Abbott Laboratories....671
Allied Products, Inc....Insert between 564, 565
Aluminum Company of America....599
Aluminum Seal Co....Insert facing 624
American Cholesterol Products, Inc....646
American Cyanamid & Chem. Corp. Ins. facing 557
American Druggist....552
Anchor-Hocking Glass Corp....607
Andresen, J. C....642
Ansbacher-Siegle Corp....566
Armour & Company....669
Armstrong Cork Co....601
Aromatic Products, Inc....Insert facing 561
Baker & Adamson....Insert between 552-553
Baker Chemical Co., J. T....Insert facing 612
Bender Corp., The....659
Braun Company, W....606
Bridgeport Metal Goods Mfg. Co....604
Broder, Harry, Inc....618
Brown Bag Filling Machine Co....633
Burke Co., Edward S....647
Bush & Co., W. J....656
Calco Chemical Co., Inc....556
Calif. Fruit Growers Ex....Ins. facing 565; 642
Can Manufacturers Institute....Insert facing 625
Carbide & Carbon Chemical Corp....546-547
Carr-Lowrey Glass Co....605
Celluplastic Corp....600
Chemo-Puro Mfg. Corp....647
Colgate-Palmolive-Peet Co....673
Colton Co., Arthur....628
Consolidated Fruit Jar Co....606
Consolidated Products Co., Inc....673
Continental Can Co....586
Corning Glass Works....602
Cosmia Laboratories....672
Crown Cork Specialty Corp....603
Dallal & Co., D. S....675
Delton Products Corp....675
Diagraph-Bradley Stencil Machine Corp....632
Dodge Cork Co....597
Dodge & Olcott Co....Insert facing 640
Dow Chemical Co....Insert facing 568; 610, 638
Dreyer, Inc., P. R....557
Duche & Sons, Inc., T. M....646
Dunkel & Co., Paul A....650
Durlin Corp....Insert facing 556
Eisler Engineering Co....630
Empire Box Corp....588
Ertel Engineering Corp....630
Evans Chemetics, Inc....560
Fairmount Chemical Co....673
Felton Chemical Co., Inc....Insert facing 552
Fezandie & Sperrle, Inc....672
Filter Paper Company....628
Fine Organics, Inc....642
Firmenich & Co., Inc....Insert between 564, 565
Florasynth Labs., Inc....Insert facing 564
Fontaine Products Corp....595
Food Research Laboratories, Inc....675
Foster-Forbes Glass Co....598
Franks Chemical Prod. Co., Inc....676
Fritzsche Bros....Insert between 648, 649
Gardner-Richardson Co....Insert facing 600
General Drug Co....Insert facing 545
General Electric Co....626
Givaudan-Delawanna, Inc. Insert between 540-541
Glycerine Producers Assn....635
Greeff & Co., R. W....646
Gunning and Gunning....670
Hagerty Bros. & Co....630
Hazel-Atlas Glass Co....Insert facing 613
Helfrich Labs., Inc....Insert between 552-553
Hema Drug Co., Inc....671
Heyden Chemical Corp....Insert facing 544
Hinde & Dauche Paper Co., The. Insert facing 592
Hoffmann-LaRoche, Inc....561
Hopkins & Co., J. L....647
Hormann & Co., F. R....633
Horner, Inc., James B....563
House of Hollywood....669
Huisking & Co., Inc., Chas. L....652
Illinois Water Treatment Co....661
Industrial Chemical Sales....Cover 2
Inland Alkaloid Co....654
Innis-Speiden Co....663
Interstate Color Co., Inc....673
Intramed Co., Inc....642
Jelly & Co., Walter H....646
Kachurin Drug Co....637
Kelton Cosmetics Co....658
Kessler Chemical Co....659
Kimble Glass Co....Insert facing 540
Kohnstamm & Co., H....Insert between 560-561
Kolmar Laboratories....Insert between 556-557
Kurz-Kasch, Inc....608
Lautier Fils....650
Leeben Chemical Co., Inc....675
Lever Brothers Co....654
L & K Laboratories....555
Lueders & Co., George....541
Lusteroid Container Co....665
Magnus, Mabee & Reynard, Inc....564
Mallinckrodt Chemical Wks....Insert facing 569
Malmstrom & Co., N. I....568
Mann Fine Chemicals....654
Mantrose Corp., The....643
Martin Laboratories....551
Maryland Glass Corp....Insert between 556-557
Mayo-Reese Co....673
McKay Davis Co....548
Merck & Co., Inc....562
Metal-Glass Products Co....604
Miranol Chemical Co., Inc....654
Monsanto Chemical Co....539
Montenier & Co., Jules....668
National Can Co....542-543
Naugatuck Aromatics....544
Neuberg Company, William D....675
New England Collapsible Tube Co....537
N. Y. Quinine & Chemical Works....565
Norda Essential Oil & Chemical Co....553
Orbis Products Corp....614
Owens-Illinois Glass Co....Insert between 560-561
Oxzyn Company....540
Package Machinery Co....622
Paisley Products, Inc....594
Parento Co., Compagnie....Insert facing 541
Paris Cosmetics, Inc....558
Parsons Imports, M. W....643
Penick & Co., S. B....Insert facing 553
Pennsylvania Refining Co....Insert facing 641
Pfaltz & Bauer Co., Inc....672
Pfizer & Co., Inc., Chas....Cover 4
Pittsburgh Plate Glass Co....630
Plaskon Division (Libby-Owens-Ford)....596
Pneumatic Scale Corp., Ltd....Insert facing 601
Polak & Schwarz, Inc....675
Powell & Co., Inc., John....666
Pulverizing Machinery Co....628
Remus & Co., Inc., Edward....662
Richford Corp....608
Ritchie & Co., W. C....Insert facing 593
Robinson Wagner Co....656
Schimmel & Co., Inc....550
Schofield-Donald Co., Inc....660
Seeley & Co., Inc....644
Seydel Chemical Co....606
Sherwood Refining Co....652
Smith, George F....672
Stafford-Allen & Sons....549
Standard Alcohol Company....637
Stange Co., Wm. J....675
Stanton Laboratories....668
Stevens-Wiley Mfg. Co., Inc....606
Stokes Machine Co., F. J....620; 629
Stokes & Smith Co....633
Sturge Ltd., John & E....545
Swindell Bros., Inc....590
Synfleur Scientific Labs., Inc....567
Syntomatic Corp....Insert facing 560
Thurston & Braidich....644
Tombarel Products Corp....664
Union Carbide & Carbon Corp....546-547
Ungerer & Co., Inc....Cover 3
U. S. Automatic Box Machy Co., Inc....631
U. S. Bottlers Machinery Co....632
U. S. Industrial Chem., Inc....Ins. bet. 616-617
van-Ameringen-Haebler, Inc....Ins. bet. 544-545
Vanderbilt Co., R. T....656
Van Dyk & Co....667
Verley & Co., Albert....Ins. bet. 548-549
Viking Paper Co., Inc....670
Vorac Company, The....644
Warner Brothers Co....609
Welch, Holme & Clark, Inc....658
Whittaker, Clark & Daniels, Inc....559
Will & Baumer Candle Co....644
Wolf & Co., Jacques....647
Zimmerman Incorporated, N. F....554